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ABSTRACT

The monograph provides a descriptive case study and an evaluation of innovative aspects of the adult education system developed in the Dominican Republic under the sponsorship of Radio Santa Maria. The specific focus is on the attempts to implement some of the elements of "lifelong education" in the context of a country undergoing relatively rapid socio-economic development. A brief section describes the educational systems in the Dominican Republic and the dilemmas faced if attempts to achieve present educational goals and goals of a balanced socio-economic development must be based on traditional educational methods. The case study of the Santa Maria model of radiophonic schools details composition of the student body, the curriculum, the educational methodology, the duties of the field teacher and student, the approaches of Radio Santa Maria in introducing the radiophonic schools, the system of field supervision, and the structure of central administration. The results of the evaluation are then presented. Finally, a summary evaluation of the innovative aspects of the Santa Maria model is given. (HAB)

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NEW METHODOLOGIES IN ADULT EDUCATION:
A CASE STUDY AND EVALUATION OF THE SANTA MARIA RADIOPHONIC PROGRAM

Robert A. White

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FOREWORD

The present study has its origin in the initial contacts of field representatives of UNESCO visiting the Dominican Republic in 1972. In the two years following, through the continued interest of Dr. Dino Carelli, director of the UNESCO Institute for Education, the idea of a case study and evaluation of the innovative primary and intermediate level radiophonic program of Radio Santa Maria gradually became a concrete research proposal. The difficult task of mobilizing the funds and professional team for the field research and analysis has fallen to P. Antonio Cabezas, director of Radio Santa Maria, and his untiring cooperation with the UNESCO Institute for Education has been the major support in bringing this to a completion. Financially, the research has been made possible through the cooperation of the Fondo para el avance de las Ciencias Sociales en la República Dominicana, Santo Domingo; the International Jesuit Center for Social Communication, Rome, Italy; Radio Santa María; and the UNESCO Institute for Education, Hamburg in the Federal Republic of Germany.

For me, the opportunity of delving more deeply into radiophonic schools at the advanced primary and intermediate level of more formal education has been most interesting, after several years of study of radiophonic literacy programs and agricultural education in Honduras and other Central American countries.

I am grateful to Lic. Ramón Velasquez N., director of the Instituto de Investigaciones Socio-Económicas, Tegucigalpa, Honduras for patiently allowing me a six months leave from my work in Honduras in order to participate in the present study.

Much of the collection of data in the field and then the coding was directly supervised by Prof. Radhames Mejia, Director of the Centro de Estudios Sociales at the Universidad Católica Madre y Maestra, Santiago, Dominican Republic. Students from the Dept. of Social Work from the same university made up much of the interviewing and coding staff.

Eduardo Garcia and Henry Shute, of Radio Santa Maria, were of immense help in gathering up the endless details in the description of the radiophonic program and other aspects of Radio Santa Maria. Douglas and Eunice Gwynn, finishing graduate students in the Dept. of Rural Sociology at Cornell University, Ithaca, New York, U.S.A. were helpful collaborators in the computer analysis of the statistical data. During the six months of the study, it was my intention to be as much as possible a participant observer of Radio Santa Maria, and I am grateful for the hospitality and patience of all of the staff of Radio Santa Maria.

The most pleasant hours in this study were spent with the hundreds of radiophonic students and small farmer families of the Cibao region of the Dominican Republic. They have made Radio Santa Maria possible and to them belongs the most sincere tribute of all.

Robert A. White
La Vega
The Dominican Republic
April, 1975

INTRODUCTION

The overall purpose in this monograph has been to provide a descriptive case study and an evaluation of innovative aspects of the adult education system developed in the Dominican Republic under the sponsorship of Radio Santa Maria. The specific focus is upon the attempts to implement some of the elements of "lifelong education" in the context of a country undergoing relatively rapid socio-economic development.

One of the fundamental premises of the present study is that education is both a preparation for social roles within a particular society and an involvement of teachers and students in a common search for ways of defending and expanding the human spirit within that social structure. This premise implies a constant attitude of openness and flexibility regarding possible changes in the content and strategies of education in all educational planning, but perhaps more so in the developing countries of the Third World. At least three factors of social change appear to be of critical importance for educational innovation in developing countries. First, the technical-industrial institutions which developed in the North Atlantic region over a period of centuries are being introduced in many nations in a matter of one or two generations, placing immense demands for all levels of technical and professional training. Second, the social power which accompanies the introduction of economic and technical resources within often elitist, hierarchical social structures tends to cause great social imbalances. With these social tensions strong socio-political movements are rising among the popular classes which are often the most significant "educational experience" in the lives of individuals with little formal education. Third, in the face of the extension of a universalistic technical culture, often backed by powerful international economic forces, there is a reassertion of localistic and nationalistic values. These are the wider structural realities which planners cannot ignore if education is to be related to life contexts. And these changes are happening so rapidly and are placing so many demands on all age levels that education can no longer be conceived of as a preparation of the young for the future. For this reason, educations are tending to recast their general frame of reference in terms of lifelong education.

The guiding concept in lifelong education is that education is a means to be made available with maximum flexibility to all individuals who wish to respond to whatever opportunity or demand presents itself at any stage of their lives. It is an attempt to move educational experiences out of the overly rigid institutional structures which have made students passive objects and toward a system in which individuals may actively define and fashion their own learning process.[1] Education thus becomes a response to personal needs and growth and more intimately connected to experiences in the home, work, or the community. It may be that adults suddenly find a need for forms of education which were not available or not thought necessary in their childhood or youth. And in a rapidly changing society, there may be needs for several or many significant learning experiences.

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[1] Paul Legrand, Introducción a la educación permanente. Paris: UNESCO, 1970, pp. 57-65; R.H. Dave, Lifelong Education and School Curriculum. Hamburg: UNESCO Institute for Education, 1975, pp.15-27.

There is an increasing interest in the concept of lifelong education and the report of the International Commission on the Development of Education, published by UNESCO in August 1972, proposed..."lifelong education as the master concept for educational policies in the years to come for both developed and developing countries."[2] However, relatively little research has been done on the various forms of practical application of this concept. Given the rising importance of lifelong education the present study has been carried out with four objectives:

1. Demonstrate the operational validity and significant advantages of pertinent characteristics of the concept of lifelong education, especially in comparison with more traditional forms of education.

2. Provide a concrete example of the ways and means of putting into practice at least some of the aspects of lifelong education, and thereby gain further insights regarding the theory as well.

3. Develop illustrative material describing a concrete model of some aspects of lifelong education, the problems likely to be encountered, and the expected outcomes for diffusion among the community of educators and others interested in adapting their educational policies and programs in the perspective of lifelong education.

4. Finally, provide an appraisal of current innovations in radiophonic schools and the contribution of radiophonic schools to social change.

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[2] UNESCO: *Learning To Be, the World of Education Today and Tomorrow*. Paris: UNESCO, 1972, p. 132.

The specific case study selected for this analysis is the cultural-educational radio station and system of radiophonic schools, Radio Santa Maria, in the north-central, "Cibao" region of the Dominican Republic. This institution has been working for more than twenty years in various forms of popular education and rural development activities and has been particularly successful in designing radiophonic programs at the advanced primary and secondary education levels. Radio Santa Maria began as a small cultural-religious broadcasting station of the Roman Catholic Diocese of La Vega in 1956 under the direction of the Jesuit Fathers and gradually expanded into a ten kilowatt commercial-educational station with the largest listening audience inthe densely populated rural areas of the Cibao valley. In 1964 a radiophonic literacy program, following the model of Radio Sutatenza (Acción Cultural Popular or ACPO) in Colombia, was established, and over a period of six years 25,459 adults received literacy certificates. On the basis of these radiophonic schools, significant programs of community development, small farmers' associations, and cooperatives were promoted in the rural communities within the listening area of the radio station.

In 1972 P. Antonio Cabezas assumed the position of director of Radio Santa Maria, and an analysis of the potential of the radio media for rural development was carried out which indicated that the unstructured cultural programs and literacy training no longer sufficed for the rapidly changing conditions in both rural and urban areas of the region. After studying various possible models, a complete reorganization of the adult education program was initiated in 1971 which has attempted to combine a series of objectives.

1. At the most general level the plan proposed to provide adults of a lower-status background with a quality education enabling them to take advantage of new opportunities in an expanding economy and, at the same time, to exercise aggressive leadership for the social development of the country. Translated into more specific goals, the following steps were projected:
   a) Since so many rural communities lacked educational opportunities beyond the third or fourth grade, there was a necessity to provide adults with an opportunity for an accelerated primary and intermediate program, grades one through eight, permitting students to employ a more technical agriculture, enter secondary schools, or gain skilled urban employment. Radiophonic schools had gained the reputation of a purely remedial, inadequate educational media staffed by volunteers, and the system would have to be equally or more exacting in content and method than the existing adult education programs using classroom methods.
   b) It was essential that these programs be coordinated with the educational system established by the Secretariat of Education of the government of the Dominican Republic and that the same official diplomas be granted to radiophonic graduates as were granted in the public and private institutions

using traditional methods so that radiophonic graduates could enter secondary schools and have equal employment opportunities.

c) The system would provide basically the same course content as the official primary and intermediate curriculum, but adapted, through direct practical application, to the psychology and immediate life context of adults, especially to that of adults in a rural, lower-status milieu.

d) In order to overcome the widespread dependence on passive, rote-memory methods of learning, the system would have to emphasize the development of individual initiative and analytic capacities in the adult student.

e) Participation in community organizations was seen as an integral aspect of the adult education process, and the course content would be designed to equip and motivate students for participation and leadership in community organizations.

f) An emphasis on human rights and awareness of socio-economic inequalities would be integrated into the course content in order to prepare students to contribute to a process of social development in the Dominican Republic.

g) Semi-formal training courses in agriculture, nutrition and health, homemaking, and childcare were also envisaged as building upon and as supplementary to this basic curriculum.

2. As a means of covering some of the costs and to avoid the phenomenon common in many radiophonic and less formally

structured programs of desertion and low levels of commitment to study, the student would be required to make a monetary contribution equal to the minimum wages earned in three or four days of work.

3. While maintaining high standards, the program would be organized with the greatest possible flexibility to remove all conceivable artificial barriers such as geographical isolation or economic disadvantage.
4. Since traditional education methods and even some radiophonic systems are incurring rapidly increasing costs which are preventing the extension of educational opportunities, greater efficiencies in teaching and supervisory staff would be sought so that cost per student would not exceed US$.12.00.
5. The system would be so easily mounted and managed that it could be extended on a national basis in a few years and be sustained with few problems.

Radio Santa Maria initiated its reorganized adult education program in August, 1971 on an experimental basis, and over a period of five years has gradually evolved a system which incorporates six types of learning experience.[3]

1. The basic educational aid provided the student is a weekly set of six to eight attractively printed lesson sheets, one for each subject matter, containing on one side an outline of

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[3] Radio Santa Maria used as a model the radiophonic adult education program of the Canary Islands, the system of ECCA (Emisora Cultural Canaria), but very significant adaptations to the Latin American context were made.

of the material to be explained in one week of radio broadcasts and, on the other, a series of written exercises. These lesson sheets, which, over the twenty-three weeks of a course, form a combination text and workbook, are distributed to the student each week for work in the home. Thus, the system of Radio Santa Maria resembles a correspondence course with broadcast explanations and a weekly meeting with a field teacher.

2. Second in importance is a one-hour, daily broadcast explaining the material in the lesson sheets: one half hour given to explanation and one half hour to working the exercises.
3. Supplementing the lesson sheets and daily broadcasts is a field teacher who is to correct the written exercises, answer student questions and detect weaknesses of individual students so that help may be given if necessary. The field teacher also performs administrative tasks of enrollment, giving examinations, and forwarding student fees to the central office. The student is expected to learn through study of the distributed lesson sheets and the broadcast classes so that the function of the field teacher is primarily the added element of personal guidance.
4. As a communitarian dimension of the learning process, the field teacher holds a weekly meeting with the students who form a "sector" to answer questions in a group context, explain material which is a problem to the whole group, provide general reviews for examinations, and give the examinations.

An important part of this weekly interchange is the discussion of a social question which has been the "central theme" of the various subject matters during the week so that students learn to express themselves in groups.

5. Radio Santa Maria provides other general cultural and educational programs and a series of special programs for different age and occupational groups. Since many of the students and their families listen to Radio Santa Maria regularly through the day, the programs of the station are designed to give an important cultural and educational support to the more formal educational process.
6. Although Radio Santa Maria maintains no staff for promoting organizations at the community level, its educational programs work through existing organizations and the activities of these organizations are looked upon as an extension of the more formal educational courses. For example, broadcast time is reserved for the youth clubs, the peasant organizations, relgious educational programs, etc., and the radio station serves as the newspaper and telephone advising of meetings to be held, current activities, and other events of interest to each organization. It is expected that students of Radio Santa Maria will consider active participation and leadership in community organizations part of their education.

Since 1971 Radio Santa Maria has gradually extended this adult educational program to all parts of the Dominican Republic so that there are now more than 520 field teachers making a primary and intermediate level education available in virtually all rural communities of the country.[4] The decision has been made to maintain the central office close to the original site in the Cibao region, and in 1972 enlarged facilities for the teaching staff and broadcasting studios were constructed in La Vega, an important agricultural center of the region. The first regional field office was opened in Dajabón near the Haitian frontier in 1973, providing a base for expanding the radiophonic school in that border area, and in 1974 a second regional field office was established in the capital, Santo Domingo, as the administrative center for the program in the working class neighborhoods of that city of nearly one million people and in the southeastern sections of the country. Radio Santa Maria has increased its own broadcasting capacity to reach a wider radius and has made arrangements for broadcasting the daily radiophonic classes with five other religious and commercial stations. From the outset the educational program has been closely coordinated with the Secretariat of Education. The examinations of grades six and eight are held in accordance with government regulations, and official primary and intermediate level diplomas are granted to graduates of the Radio Santa Maria system by the Secretariat of Education. Since the scholastic year of 1972-73, approximately 13,000 students have successfully passed examinations in grades one through eight each year.

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[4] The only region of the Dominican Republic in which the radiophonic schools are not yet functioning is that comprising seven provinces in the extreme southwestern corner of the country. However, a cultural-educational station which will broadcast the classes plans to begin operations in the region in 1977 and the radiophonic schools will follow this.

The present study will analyse and evaluate the Radio Santa Maria case in the light of five major aspects of lifelong education: 1) *universalizing lifelong education*, that is, by using mass communication technology and reducing costs, all forms of education (not just minimum forms of literacy training) are made available to all groups, especially lower-status sectors presently excluded by traditional educational methods; 2) introducing a *flexibility* in content, techniques, and time schedule of learning so that individual needs are responded to and the individual directs his or her own learning process; 3) *application of different learning methods and new technologies* which will insure a better quality of education for adults who are attempting to integrate education into difficult time schedules, work demands, etc.; 4) adopt a content and methodology which permit individuals to *adapt themselves to a rapidly changing society and to prepare themselves for creative participation in the process of change*; 5) *relate educational experiences more closely to the milieu of the family, the community, and work*.

The major thesis is that, by incorporating these elements of lifelong education, students in an adult education program such as that of Radio Santa Maria not only have higher levels of academic achievement than in the prevalent full-time, insti-

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[4] R.H. Dave, *op.cit.*, pp. 17-24.

tutionalized and teacher-centered forms of learning, but at much lower costs per student. However, a system which embodies objectives such as those of Radio Santa Maria would signify for many educational planners a considerable departure from established educational policies and practices. Before considering the introduction of elements of lifelong education, many will question whether this really is a response to needs in their contexts, whether it demands a type of administrative and teaching personnel which simply is not available, and whether the levels of academic achievement are actually an improvement over those obtained in the existing system.

In the following chapters I will explore four questions which appear to be quite typical: 1) To what extent are elements of educational method such as those in the Radio Santa Maria system an important condition for a balanced national development which cannot be supplied by traditional forms of education? 2) How can a system combining correspondence courses, radio classes, and local teacher guidance be established and administered with efficiency? 3) Are levels of academic achievement in the Radio Santa Maria system not only equal to but superior to those of comparable adult students in institutions using traditional methods? 4) Can a quality level of education be provided for adults at far lower costs than at present?

Chapter I provides a brief background description of educational systems in the Dominican Republic and the dilemmas faced if attempts to achieve present educational goals and goals of a balanced socio-economic development must be based on traditional educational methods.

Chapters II to IV form the case study of the Santa Maria model of radiophonic schools: Chapter II describing the composition of the student body, the curriculum, and the educational methodology; Chapter III, the duties of field teacher and student; and Chapter IV, the approaches of Radio Santa Maria in introducing the radiophonic schools in a new region, the system of field supervision, and the structure of central administration.

Chapters V to VIII present the results of the evaluation of the Santa Maria model of adult education; Chapter V, the [illegible] analysis of the statistics of enrollment, students examined, and students promoted from 1971 to 1975; Chapter VI, the academic achievement of the radiophonic students compared to students in the adult education program using conventinnal classroom methods; Chapter VII, the influence of the radiophonic schools in attitudes and values of students; and Chapter VIII, the cost per student in the Santa Maria model of radiophonic schools compared with the cost per student in an adult education program using traditional methods of classroom teaching and field supervision.

Finally, in the Conclusions, a summary evaluation of the innovative aspects of the Santa Maria model is given.

CHAPTER I

THE DOMINICAN REPUBLIC: DILEMMAS IN EDUCATIONAL PLANNING AND IN ACHIEVING A BALANCED NATIONAL DEVELOPMENT

The initial question posed in the Introduction concerns the relative importance of innovations embodying principles of lifelong education as a condition for national development. To evaluate accurately the significance of a system of adult education such as that of Radio Santa Maria, it is necessary at the outset to situate it within the concrete economic, social, and educational reality of the Dominican Republic.

Problems in Combining Rapid Economic Growth With Improved Social Opportunities for Lower-Status Sectors

The Dominican Republic, occupying the eastern three fourths of the Caribbean island of Hispanola, has a relatively small area, 48,442 km^2 making it slightly larger than Denmark and somewhat smaller than Costa Rica. However, the resources of a series of fertile valleys, rolling coastal plains, and two mountain ranges rising to heights of more than 3,000 meters near the western, Haitian border have endowed the country with a rich potential in agriculture, mining, forestry, and hydroelectric power. In spite of its small area, the Dominican Republic ranks fifth in production of sugar in Latin America, third in cacao, sixth in tobacco, first in nickel, fourth in bauxite, and, since 1975, is the largest producer of gold.[1] The population, estimated on the basis of the 1970 national census with a 2.9 percent annual rate of increase, is placed at 4,650,000 in 1975, 47.3 percent under fifteen years of age and 60 percent rural.[2] In the last eight years, the Dominican Republic has had an annual economic growth rate approaching 10 percent,[3] one of the highest in Latin America, and in 1975 the per capita income is calculated at US$ 755.[4]

In its development policy the Dominican Republic is facing the common problem of finding ways of creating an economic infrastructure which will serve as the basis for a long-term economic growth and, at the same time, provide the health, nutrition, and education--especially among the long-neglected rural lower-status groups--which are necessary for the human development of the country. In the Dominican Republic this problem is more intractable because of the heritage of a turbulent political history. In the 150 years since Independence from Spain in 1821 the country has experienced an occupation by Haiti from 1821 to

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[1] Rankings are based on data taken from:Secretaría General de la Organización de los Estados Américanos, *América en Cifras, Situación Económica*, "Vol. 1, Agricultura, Ganadería,Silvicultura, Caza, y Pesca;" "Vol. 2, Industria." (Washington,D.C.,1974). Estimates of ranking in gold production are based on:Banco Central de la República Dominicana, *Boletín Mensual*, Enero-Marzo, 1975. Santo Domingo, p. 82. Cf. also Academia de Ciencias de la República Dominicana, Sección de Economía, *Economía Dominicana, 1975*,"Minería," Santo Domingo, Mayo, 1976.

[2] Nelson Ramírez, "Situación y tendencias demográficas actuales en la República Dominicana," *Estudios Sociales*, Año VII, Nu. 1-2 (Enero-Junio), 1974, pp.5-52.

(Notes on p. 15, cont.)

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[3] International Monetary Fund, "Recent Economic Development in the Dominican Republic," Special Report, May 2, 1975.

[4] Banco Central de la República Dominicana, *Cuentas Nacionales: 1968-1973*. Santo Domingo, R.D., Febrero, 1975, p. 75. Based on projections from 1973, 8 percent growth in 1974, 5 percent growth in 1975 (constant prices, 1962) and a rate of increase in prices of 15
percent for the two years,

1844; a brief reannexation by Spain from 1860 to 1864; a United States military government from 1916 to 1924; the notoriously repressive dictatorship of Rafael Trujillo from 1930 to 1961; and, finally, the civil war and United States military intervention in 1965.

In response to the political and economic crisis following the civil war of 1965, public policy tended to favor heavy investment in economic infrastructure (roads--with emphasis on inter-city and urban transportation--hydroelectric dams and irrigation, and public buildings), the modernization of the state agricultural and industrial enterprises which had been the private patrimony of Trujillo and nationalized in 1961, and urban, largely middle-class housing.[5] The later period of Trujillo had already seen the beginning of an increasing focus of investment and economic growth in the national capital, and this trend was greatly reinforced from 1968 to 1975.[6] This pattern of investment stimulated a rapid process of urban immigration--the second most rapid urbanization process in Latin America according to one account[7]--and the growth of an urban-based middle class which has been the main beneficiary of new socio-economic opportunities.

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[5] Oficina Nacional de Planificación, "Estrategia para el desarrollo socio-económico de la República Dominicana, 1976-1986," Santo Domingo, Julio de 1975, pp. 40-71; José Luis Alemán, "Ciencia, Tecnología y Política de inversiones en R.D. 1966-1974," Estudios Sociales, Ano VIII, Nu. 1, 1975, pp. 9-12.

[6] Oficina Nacional de Planificación, op.cit., p. 99.

[7] Roberto Casá, "Contraste entre el medio rural y urbano," Educación y cambio social en la República Dominicana. Ediciones Intec, Santo Domingo, 1974, p. 14.

In this period (1966-1974), the least favored group in public policy has been the rural lower-status sector which forms the largest population segment. This is reflected, for example, in the lack of access of smaller agricultural producers to credit,[8] and the attempt to keep domestically produced food staples low has constituted a significant disincentive to producers, largely smaller farmers. Thus, the commercial family-unit agricultural producers have tended to face a extended term of economic deterioration, a fact which has influenced rural unemployment and the "push migration" from rural to urban areas.

The Lack of Educational Opportunity in Rural Areas

The disadvantges suffered by the rural lower-status sector are especially evident in the area of education. The total number of students at the primary level increased from 516,000 in the scholastic year, 1964-1965 to 942,000 in 1974-1975. However, enrollment growth has been much more rapid in urban areas, 171,600 in 1964-1965 to 406,000 in 1974-1975 or an index of 236 to 100, while growth in rural areas has been 344,000 to 536,000, an index of only 156 to 100.[9] Enrollment at secondary levels increased from 30,600 in 1960-61 to 112,955 in 1970-1971, an index of 369 to 100.[10] University enrollment has grown from 3,443 in 1960-1961 to 31,684 in 1974, an index of 919 to 100.[11] The rapid growth of secondary and university enrollment is indicative of the increase of educational opportunities for the urban middle-class sectors.

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[8] Oficina nacional de planificación, op.cit., p. 56.

[9] J. Pernau-Llimos, J. Lanza Diego, D.A. Lemke, "República Dominicana: Reforma de la ensenanza primaria," Misión de la UNESCO, Santo Domingo, 1975, p. 3.

Enrollment statistics for urban areas are not categorized along socio-economic lines, but it is likely that much of this rise in urban enrollment is among the steadily employed laborers and middle-class groups while in the densely populated neighborhoods fed by migration from rural areas and with high unemployment or underemployment, the enrollment statistics are very similar to those in rural areas.

A major factor in the disparity in rural and urban educational opportunities is the simple lack of complete primary schools in rural areas of the Dominican Republic. In 1969-1970, 73.2 percent of the urban primary schools had the complete six grades while only 12.6 percent of the rural primary schools had the sixth grade, and nearly 60 percent of the rural schools have at most grades one to three.[12]

Because of the lack of complete primary schools but also because of higher rates of school dropout, the sixth grade enrollment in rural schools in 1971-1972 represented only 9.5 percent of the group which entered first grade in 1966-1967, while the sixth grade enrollment in urban schools reached 52.2 percent of first grade enrollment.[13] Although there has been some expansion of the rural primary school system since 1961, the percent of students persevering until the sixth grade has risen only 1.6 percent to 9.5 percent in the years from 1957-1958 to 1971-1972.

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[10] Oficina Internacional del Trabajo, Generación de empleo productivo y crecimiento económico. Ginebra, 1975. p. 303.

[11] Oficina nacional de planificación, op.cit., p. 70.

[12] Oficina Internacional del Trabajo, op.cit., p. 306.

[13] Ibid., pp. 304-305.

The repetition of grades is also significantly higher in the rural than in the urban schools. In the scholastic year 1968-1969 and 1969-1970, according to official statistics, the repetition of first grade in the urban schools was 25.9 percent while in the rural schools repetition was 37.0 percent. In the second grade the repetition in the urban schools was 11.2 while in rural schools it was 22.1 percent. Because of the repetition, many students in the rural primary schools are overage and the overcrowding of the existing limited facilities is, in part, due to students who are repeating one or even two years.

Influencing the poor academic achievement of students in rural primary schools is the inadequate preparation of teachers. In 1969-1970, 70 percent of the rural teachers had no more than an eighth grade education and more recent figures state that 83 percent of the rural teachers do not have sufficient professional preparation to carry out their work.[14]

Indirectly, the complete lack of facilities and the often delapidated state of schools in rural areas is a factor. In a survey in 1968, 44.6 percent of rural schools did not have a desk for the teacher, 22.9 percent lacked a blackboard, 81.1 percent had no map of the country, and 96.4 percent had no map of the world. With national educational spending for texts and educational materilas at only 24 cents per pupil, few if any students have texts in the rural schools.[15]

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[14] "Reforma de la ensenanza primaria," UNESCO, 1975, p. 9

As a result of the inadequacy of the educational opportunities, the proportion of the population in rural areas without instruction or with insufficient instruction to bring them to the level of functional literacy is very high. In the rural sector 50.5 percent of the population has had no schooling, and 90 percent have less than four years of schooling, while in urban areas only 22.4 percent has no schooling and 57 percent has less than four years.

Table 1.1 Rural and Urban Population of 25 Years or More According to Levels of Education (1970)(Percentages)[1]

Years of education	Urban Areas (Both sexes)	Rural Areas (Both sexes)
0	22.4	50.5
1-4	34.5	39.2
5-6	16.3	6.3
7-10	17.8	3.1
11-12	5.1	.6
13 and more	3.9	.2

[1] Source: Oficina Internacional del Trabajo, *Generación de empleo productivo y crecimiento económico*, Ginebra, 1975, p. 313.

This pattern of educational opportunity has at least three significant implications for national as well as personal development:

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[15] Secretaría de Estado de Educación, Bellas Artes y Cultos, Sección Técnica de Estadísticas: *Equipo escolar, existencia y déficit en las escuelas primarias rurales (encuesta por muestreo)*, enero de 1969. Cited in OIT, *Generación de empleo*, pp. 306-307.

1. The continued state of practical illiteracy in rural areas is an obstacle to the technification of agriculture[16] and the strengthening of rural economic organizations.
2. The high outward migration from rural, lower-status sectors toward the large urban centers will be much less prepared to enter the level of skilled workers and to contribute to the long-range plan of industrialization which is projected. The cycle of poverty and lack of skills which begins in the rural areas is simply continued in the high rate of unemployment and underemployment in the cities.
3. Many capable youth in rural communities whose personal interests are not agricultural, because they have no opportunity to complete the primary and intermediate courses, are unable to enter skilled technical or professional positions.

These conditions, feeding on existing educational institutions, reinforce trends toward a vicious cycle of a rapidly modernizing urban sector and a backward, dependent rural (and urban lower status) sector.

Moves Toward Educational Reform in the Dominican Republic

Recognizing the educational problems described above, the Secretariat of Education with UNESCO mission began in 1975 a series of educational reforms which have their greatest emphasis at the primary school level in rural areas:

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[16] The OIT mission to the Dominican Republic observes that present programs of agricultural development have little possibility of success "if they are not accompanied by extensive measures to improve primary schooling and organize the instruction of adults in rural areas." OIT, *Generación de empleo*, p. 23.

1. Insure that all children in the country finish at least four years of primary school education ;
2. Eliminate the repetition of grades as well as the problem of children who are overage for their grade and, indirectly, reduce the overcrowding of existing facilities;
3. Introduce a curriculum which is more relevant to the needs of economic development and agrarian transformation;
4. Implicitly, bring the educational system in rural areas up to a par with that in urban areas.[17]

The principles underlying this reform reflect many of the guiding premises of lifelong education and the concrete steps recommended--a non-graded system in the first four calendar years to insure that all children gain at least some elements of basic education, allowing students to progress at their own level with the teacher playing a diagnostic and guidance rather than a sanctioning role, and the emphasis on the relation of school activities to life in the family and community--promise significant long-range improvement in educational achievement. As the projected plan stresses, the success of this reform depends in great measure on the teacher's ability to adapt to the new concepts and methods of education. One of the key aspects of the educational reform is the program for re-educating teachers through forms of in-service training and a three-year radiophonic course.

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[17] "Reforma de la ensenaza primaria," UNESCO, 1975, p. 15.

With a strong degree of support from teachers and administrators, success in retraining teachers, and a large investment in buildings and equipment, the reform will insure at least a minimum basic education in rural areas. However, there still remains the problem of the very large number of youth and adults who have missed this opportunity or those who complete the primary level and wish to continue their studies now or later. An educational reform which incorporates into the earlier stages of formal education elements of lifelong education can make solid contributions to national development only if it is complemented by educational opportunities available at every stage of life.

Adult Education Opportunities in the Dominican Republic

Although there are a variety of adult education efforts in the Dominican Republic,[18] the system maintained by the Secretariat of Education[19] is of special interest not only because it is the largest single system but because, in the present study, it will be the basis of comparison of an alternate method, that of Radio Santa Maria.

The Secretariat of Education has had a formal adult education program providing at least literacy training since 1942, and in 1953 the National Office of Adult Education (Dirección

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[18] Adult education efforts which merit special mention are those of Alfalit Dominicana and a system of secondary education through correspondence courses, Acción Pro-Educación y Cultura (APEC).

[19] The official title, Secretaría de Estado de Educación, Bellas Artes y Cultos, will be referred to more briefly as the Secretariat of Education in the present study.

General de Educación de Adultos) was created as a separate department within the Secretariat of Education. A system of night schools, using the day school facilities and offering alfabetization through grade eight, gradually developed in the towns and cities, with an administrative system parallel to that of the primary school program. By 1968, when systematic statistical records were first maintained, there were 405 urban and rural schools, an enrollment of 35,540, and grade promotions of 22,349. Over a period of eight years, from 1968 to 1975, the increase in the number of schools has been insignificant, but there has been a 40 percent rise in the number of teachers and a 41 percent increase in the number of grade promotions. In 1975 the administrative personnel included a total of eighteen: the general director and subdirector, nine technical and subordinate administrative positions, and seven in secretarial or office assistant positions. Outside of the central office there were in 1975 four regional inspectors, supervisors in forty-seven zones, and fifty-two directors and subdirectors of schools.[20]

In addition to the night schools, the National Office of Adult Education supports various literacy projects which, in 1975, granted 466 certificates, vocational courses for women which granted 1,578 special diplomas in 1975, and a vocational agriculture school with a total enrollment capacity of 100 which combines a primary school education with practical training for peasant youth. A massive radiophonic literacy program, which, from 1971 to 1973, obliged all radio stations to broadcast a half hour class each evening from 7:00 to 7:30, was largely unsuccessful and has been discontinued.

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[20] Selected tables presenting statistical data of the National Office of Adult Education are found in Appendix I.

The adult education program is able to use the buildings and equipment of the day schools, which, in the urban areas, are generally adequate. However, the major problems are limited funds and salaries so low that it is difficult to attract qualified teachers, when these are available. The teachers at the first and second grade level receive monthly salaries of US$30 for a one hour and a half daily class; those at the third and fourth grade levels, US$40 for two hours of daily class; fifth and sixth grade teachers, US$60, and seventh and eighth grade teachers, US$70, for three hours of daily class. Teachers in the adult education system are usually individuals who teach or are involved in other work during the day and seek the night school classes as a form of additional income. The National Office of Adult Education is reluctant to add classes on a regular basis unless there is assurance that there will be enough students. Thus, most teachers begin as volunteers who gather a group of students and continue without pay in the hope that within a year or so their petition to the central office for a salary will be approved. Discussions with zone supervisors revealed that often half of the teachers in a school are "volunteers," and that, of 500 petitions for salaries in 1975, it was possible to grant only about 50. The problem of finding capable teachers may be aggravated by a new legal measure prohibiting teachers in the morning and afternoon class schedules from accepting a third night shift of teaching.

Before 1975 there were no text books available for students in the official adult education schools, and teachers followed the practice of dictating class materials or writing them on the black board for students to copy into notebooks. In 1975 some of the staff of the National Office of Adult Education prepared a series of texts largely for the third level of primary school (fifth and sixth grades), and a limited edition was published by a private firm. The set of texts for the third level was sold to the student for US$7.35. In 1976 this set of texts was not generally available to students, but there is a plan to print further editions and sell these to students at cost.

The adult education system of the Secretariat of Education has expanded in response to a widespread demand for educational opportunities in a country undergoing relatively rapid modernization, but it is seriously hampered by a lack of adequate funds, quality teachers, text books, properly trained supervisors, and other elements which are necessary in the traditional classroom method. Although the reform being instituted in the general educational system is even more necessary in the education of adults, it will be more difficult because of the method of recruiting teachers. Moreover, the system of night classes, presupposing the the assembling of students in a central place p 26

Although the reform being instituted in the general educational system is even more necessary in the education of adults. There are no concrete plans for extending the ~~educational~~ reform to this level.

with well-lighted rooms, is difficult to extend to isolated rural communities. These factors place serious limitations on the conventional classroom, direct-teaching method as an instrument in the present plan of a more balanced national socio-economic development and agrarian transformation.

Conclusions

Development planning in the Dominican Republic faces the typical dilemma of many countries entering into a phase of relatively rapid economic growth: channeling limited resources into building an economic infrastructure and at the same time achieving a social development which overcomes a heritage of social inequalities and avoids the polarization of the country in a modernized, privileged urban sector and a stagnant, dependent rural sector. If the existing trends of extremely limited and inadequate educational opportunities in rural areas continue, there is danger that the national development process --especially agricultural development--will be limited, a type of urban immigration will be created which only extends unemployment and underemployed to urban areas, and many talented rural and lower-status urban youth will be deprived of the opportunity to enter technical and professional careers.

The projected reform of the educational system of the Dominican Republic, to the degree it is successful, promises to make a universal minimum basic education in rural areas more feasible. But it leaves unsolved the problem of those who have missed this opportunity and of those who wish to continue on their education at the upper primary and secondary levels. The adult education system using the conventional classroom methods tends to be restricted to the urban areas, especially at the upper primary and intermediate levels, and its expansion is limited by the lack of funds, quality teachers, and by the method itself.

It is in this context that a system which embodies principles of lifelong education appears to be most necessary. A departure from traditional educational methods is needed which will make available to young adults, especially in rural communities, a quality education at the upper primary and secondary levels with a flexibility that enables them to easily combine work and education and which is more directly related to community activities and the social changes in the country.

In the Introduction, the objectives and basic instruments of the system of adult education evolved by Radio Santa Maria were briefly outlined. In the following three chapters, a more detailed description is given of how certain elements of lifelong education are incorporated into a workable model.

CHAPTER II

STUDENT NEEDS AND THE EDUCATIONAL METHODOLOGY IN THE RADIOPHONIC SCHOOLS OF SANTA MARIA

In developing an educational opportunity for adults in the Dominican Republic, Radio Santa Maria has attempted to combine six different learning experiences: 1) a set of weekly lesson sheets distributed to students; 2) a daily broadcast explanation accompanying these class outlines; 3) personal guidance of a field teacher; 4) a weekly discussion involving the field teacher and the assembled students of the sector; 5) the supporting cultural and educational programming of the radio station; and 6) the expected participation of students in the existing community organizations.

The description in the following chapters of the educational methodology and the techniques of implementing this adult education system falls naturally in three different areas:

1. The design of the educational methods and curriculum and the preparation of the instructural materials by the staff of professional educators in the central office.
2. The functions of the field teacher and the responsibility of the student in the community.
3. The system of promotion, supervision, and general administration directed largely from the central office.

In analysing this system of adult education, the focus is especially upon aspects of lifelong education which have been adapted and the means of overcoming common practical problems. A further question is how this program is adapted to the needs of the students. It is helpful, at the outset, to look briefly at the kind of student that is entering the radiophonic schools of Santa Maria and what they are seeking.

The Students: Who Are They and What Are They Seeking?

As part of the larger study of the radiophonic schools of Santa Maria in 1975, 312 sixth grade students and 152 eighth grade students replied to questionnaires in a random sample of 33 sectors of the radiophonic schools in the northcentral region of the Dominican Republic.[1]

The analysis of this study of radiophonic students showed that they tend to be relatively young: the median age is 18.4 years and 90 percent are under thirty years. Since these are sixth and eighth grade students, the median age of the entire student body from third to eighth grades undoubtedly would be even lower. Slightly over half, 57 percent, are women, and 81 percent are unmarried.

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[1] The questionnaire, which sought information on the background of students, their aspirations, and their attitudes toward the radiophonic schools, was filled out by the students assembled during the week of the final examinations. The application of the questionnaire was supervised by research assistants from the Department of Social Work of the Universidad Católica Madre y Maestra who were present to explain each question, if necessary, and help the students in filling out the questionnaire. The sample represents approximately 10 percent of the total number of students enrolled in these courses.

The great majority of the students, 82 percent, live in rural communities, but, given their youth, only about 30 percent have a separate income from the land or other employment. Some 65 percent say that they are receiving help from their parents or from other members of the family in order to study in the radio schools. In the question of the socio-economic background of students, 48 percent say that their parents have at least some land; 17 percent, that their father is renting land; and 9 percent, that their father is an agricultural laborer. Another 26 percent say their parents have non-agricultural employment. Of the students from families with land, 37 percent state that their families have five hectars of land or more indicating that, in the context of the rural areas of the Dominican Republic, they tend to come from a slightly higher socio-economic status. Thus, the majority appear to be youth who are living with their parents and helping in the home or on the farm.

Nearly all of the radiophonic students have had previous public primary school education: 96 percent say they had finished the second grade; 90 percent, the third grade; 55 percent, the fourth grade; but only 17 percent, the fifth grade. Only 16 percent say that they entered the radiophonic schools at the fourth grade level, but 36 percent entered at the fifth grade level and 27 percent at the sixth grade level. Only 13 percent say that they enrolled at the seventh or eighth grade level. In the question of how much time lapsed between leaving off study in the public primary school and entering the radiophonic school, 37 percent say there was no lapse of time; 17 percent say one or two years; 13 percent, three or four years; and 32 percent, five or more years. The youth of the sample is indicated by the fact that 30 percent were under fifteen years when they first enrolled in the radiophonic schools, 24 percent between fifteen and seventeen, and 16 percent between eighteen and nineteen. In all, nearly 80 percent were twenty one or younger when they first enrolled. It appears that the majority of the students are youth who have completed as much of the primary education as they could in their community--usually to the fourth grade--and then are going into the radiophonic schools immediately or very soon after in order to complete their education through the intermediate level.

Regarding what motivations are influencing these students in their education, the indirect questions are probably the most revealing. By far the largest percentage say that mathematics is the subject which will serve them most in life, followed by Spanish language. The least important subject matter (only 4 percent select this) is social studies (social problems, civics, history). Some 90 percent say that once they finish this grade level (sixth and eighth grade), they intend to continue studying at the intermediate or secondary school level. Already, 50 percent have definite plans for leaving the community. When asked how long they would like to study, only 22 percent say they would want to terminate at the eighth grade; 25 percent would like to finish secondary school; and 37 percent would like to continue to the university level. Thus, the typical student comes from a somewhat higher socio-economic status in rural areas (in comparison with landless day laborers) and is preparing for further studies, if possible, with aspirations toward the urban middle-class status.

Radio Santa Maria has stressed student participation in community organizations. Since most are at best young adults, it is to be expected that 39.7 percent say they are participating in youth clubs while only 9.5 percent participate in the agricultural associations promoted by Radio Santa Maria, 9.9 in cooperatives, and only 6.7 percent in the women's homemaker's clubs. Religious organizations are the most frequently mentioned, 41.6 percent. Surprisingly, 33 percent say that they have held some leadership position in these organizations.

Many of the students are listening to the more general educational programs of Radio Santa Maria. The program with the greatest number of radiophonic students listening is the University for All with 60 percent indicating this. Those programs popular with young people, such as the afternoon and evening musical programs for youth, also have between 50 to 60 percent among the radiophonic students.

It is clear that the radiophonic schools of Santa Maria, for the most part, are attracting youth who are socially involved in rural communities and who have strong upward mobility aspirations. There is also a strong contingent who are more permanent in rural communities and want to prepare themselves for a more active role in rural community organizations or for a more technical agriculture, but they are probably the minority of the radiophonic students. Only about 25 percent are adults who have their own independent, full-time employment. The majority are adolescents or adolescents moving into young adulthood. It is likely that as the adults in the community take advantage of the educational opportunities and that as the current educational reform eliminates overage, repetition, and dropout in the public primary schools, the student body in the radiophonic schools at the upper primary and intermediate level will be increasingly adolescent.

Curriculum Content in the Radiophonic System of Santa Maria

The radiophonic schools of Santa Maria offer a full primary (grades one through six) and intermediate (grades seven and eight) program so that the student which finishes the full eight grades obtains the official certificate and is able to enter directly into the secondary school system. The curriculum is organized in terms of six months courses running from approximately July 10 to December 20 and from January 6 to June 30. Grades one, three, five, and seven are offered in the first semester and grades two, four, six, and eight in the second semester so that the adult student can, if necessary, complete the full eight grades in four calendar years.

This acceleration is based on the experience that the adult is able to comprehend more rapidly because of fuller life experience even though the learning process may not be as rapid as in the case of the child. The adult who is faced with the need to accelerate his career has a need to finish the course more rapidly and is motivated to apply himself more intensively. This demands a very judicious selection of materials for the weekly lesson sheets so that only essential information and skills are presented in the course. By eliminating repeated or lengthy explanations and unnessary illustrations or presuming that this is already part of the adult experience and that the adult is already making practical applications, it is possible to cover the material ordinarily required in a primary school curriculum just as thoroughly and, with the help of the field teacher, with equal or greater comprehension.[2]

This programming of continuous courses throughout the year insures that all facilities--the staff of broadcasting teachers, the printing press, and the supervisory personnel, and the field teachers--are employed throughout the year and that overhead costs per student are thereby reduced.

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[2] In 1973 the Secretariat of Education requested that the radiophonic schools of Santa Maria dedicate a full year or forty-six weeks to the seventh and eighth grades, in part to conform to the official program and because of the supposedly more difficult material at the intermediate level preparatory to secondary school. Since Radio Santa Maria can allot only two full hours of broadcasting time daily for the radiophonic schools or four half hour periods of actual class explanation to each grade, running the seventh and eighth grades for a full year implied that only four other grades could be offered during the year or only six grades in all. For this reason, the first and second grades were dropped from the scholastic years of 1973-1974 to 1975-1976, judging that these grades were the least urgent need among potential students. However, in 1976, the Secretariat restored the special permission to give accelerated courses to seventh and eighth grades, and the original program was restored with the second semester of 1975-1976.

The radiophonic school curriculum presents the same basic content as the official primary school program for adults: Spanish language, Spanish grammar, mathematics, natural sciences (elements of biology, chemistry, and physics), Dominican economy, social studies (geography, civics, and history) and handwriting. At the intermediate level English is substituted for Dominican economy. Radio Santa Maria also includes a noncredit course on the Catholic religion. Thus, each course includes eight subjects, each of which (after first level) is repeated with more extensive material.

The directors of Radio Santa Maria became aware that this curriculum in itself tends to emphasize an accumulation of unconnected facts to be memorized for an indefinite later period and often has no relationship to the present life of the students. In this form, the curriculum is not an adequate preparation for young adults in a rapidly changing society, nor does it prepare students to be active participants in the process of change. Many of the more mature, alert students are already active in community organizations and may well be aware of the discontinuity between the course content and the social reality in which they live.

Since the first semester of 1973 the radiophonic schools of

Santa Maria have incorporated what is called the "central theme." At the beginning of each semester a theme is selected on some area of human values which is currently a subject of interest in the Dominican Republic, but which is related to a more general system value-orientations. For example, the central theme for the first semester of 1974-1975 took up the subject of forms of human exploitation, dependence, and avenues of liberation, beginning with a series of reflections on human dignity and finishing with a discussion of local organization, forms of leadership, etc. This is not an additional subject of study and is not required for the examination, but it is alloted one page in the set of weekly lesson sheets and it is the first explanation of the broadcasts at the beginning of the week. The central theme is the same for all grade levels. The classes on religion, reading, handwriting, and to some extent social studies incorporate some dimensions of the central theme so that as the classes develop through the week, the implications of the central theme, announced on a Monday, are gradually drawn out.

The definition of the central theme for a particular semester is derived from a broader perspective of social change held by Radio Santa Maria: 1) the importance of counteracting the growing influence of a consumer-oriented society, or, positively, a humanism defined in terms of "being more" not simply "having more;" 2) liberation from the conditions of socio-economic dependency in which most of the students of Radio

Santa Maria find themselves; 3) formation of community both at the local level and at the level of worker-campesino solidarity; 4) active participation in movements of social change which tend to form the history of the country.

The presentation of the central theme in the lesson sheets and broadcast classes follows a methodology which attempts to lead the student toward a critical awareness of the reality in which he or she lives, a greater awareness of some of the authentic social change and humanizing tendencies in this social reality, and a willingness to engage in some organized activity which contributes to a type of social change which the central theme suggests.

To make the central theme not just an intellectual exercise and another subject of study but a communitarian experience, it is recommended to the field teacher that a part of the weekly meeting with the students--after answering questions on the course material--a discussion of the central theme be held. The field teachers are given instructions in how to serve as the animator of a round table discussion on the central theme with a secretary writing up a summary of the conclusions. Ideally, the discussion becomes a reflection on the institutions and cultural values of the local community. As a stimulus and means of supervising the discussions of the central theme, the field teachers are asked to send occasional reports on these discussions to the central office, and these are discussed on the weekly radio program for the field teacher.

Each semester, a contest is held in which the students are asked to submit some exercises based on the central theme. In the second semester of 1975, the central theme dealt with forms of dependency, and the students were asked to draw a graphic presentation of the structure of intermediaries between their community and the urban-commercial sector. Winners were selected from among 800 entries or about 10 percent of the enrolled student body.

Radio Santa Maria places great importance on its more formal graded educational system being situated within the complete daily educational and cultural programming of the radio station. These programs are looked upon as the extension and the reinforcement of the graded curriculum, especially the central theme. The afternoon program, University for All, which was noted above to be popular with radiophonic students, covers an immense range of topics from family relations, responsible parenthood, the causes of earthquakes and common diseases, to comment on current peasant protest action. The afternoon music program highlights songs of human liberation and social protest popular among Latin American youth. The religious program touches upon participation in the community. Etc. Since the typical family, especially in the rural areas of the broadcast radius, has the radio turned on much of the day, this creates a general atmosphere, a set of interests, and broad information filling in the graded courses. For this reason, Radio Santa Maria believes it advantageous to operate as a general, commercial-educational station which is the principal radio media of the region even though this reduces the amount of time which may be given to formal or semi-formal educational courses.

Radio Santa Maria has not explicitly adopted the psycho-social method, and the methodology of the central theme might be much improved if themes were generated directly from the culture and concerns of the student body rather than by the central office staff. At present the central theme tends to be somewhat extraneous to most of the subject matter, and among students who are intent on covering the essential matter to pass the examination, it is easily ignored. In the survey of 464 students, 35 percent said they thought the central theme took time away from the other subject matters.

The fact that Radio Santa Maria is dealing with an age range from adolescents of fourteen to mature adults involved in community affairs,makes it difficult to pitch the level of the central theme to a particular level of experience, interest, and comprehension. In the survey, 21 percent of the students said that they always or frequently had difficulty understanding the central theme and another 40 percent said that at times they had difficulty with it. Field teachers report that younger students find it more difficult to follow and that they do not participate in the weekly discussions. The most active, interested discussants are those involved in the youth clubs, farmer's associations, or other organizations of the community. This highlights the importance of integration with community organizations.

Educational Methodology in the Lesson Sheets and Broadcast Classes

The basic pedagogial principal underlying the composition of the lesson sheets and broadcast classes is that the student must be totally engaged in an active audio-visual experience with continuous written and oral expression. In spite of the fact that the student is not in a classroom situation, an interpersonal "dialogue" is established in which the student does not simply memorize information on the lesson sheets or given in the broadcast classes, but, with the broadcast teacher actively discovers information and integrates this into an existing structure of knowledge. In this interpersonal dialogue, the student forms a positive self-image as an active agent of learning and creating. A further dimension of this learning process is the constant relating of the learning experience to the local community and to the drama of social change in which the student is living.

The two basic instruments for putting into practice these pedagogical principles are the weekly lesson sheets and the daily broadcast. Unlike many radiophonic systems, which broadcast to a field teacher and students in a class situation and direct the field teacher in this context, the system of Santa Maria broadcasts directly to the student in the home. This eliminates the necessity of the student walking in to a central place in the community during daylight hours. However, it throws considerable responsibility on the student in learning to use effectively the lesson sheets and broadcast classes.

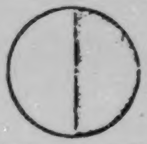
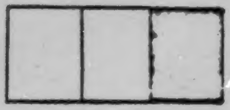
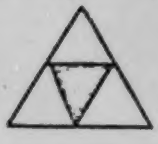
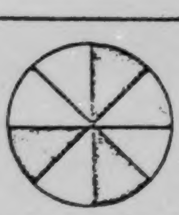
The lesson sheets are a summary on one 8 1/2" x 11" page presenting the material which will be discussed in one week of broadcast classes with pencil exercises on the back side of the sheet. Each week the student receives in the meeting with the field teacher a packet of eight sheets, one for each subject plus a lesson sheet with the discussion of the central theme. These lesson sheets serve as the text, exercise workbook, class chart, and blackboard.

It is important to note that these lesson sheets are not class texts in the ordinary sense of the term since they are-not designed to be used apart from the broadcast classes. The lesson sheets contain only the essential visual materials and oral and written practice which are necessary during the broadcast dialogues. Thus, the art of composing the lesson sheets consists of a judicious selection of subject matter and the presentation of this in an attractive and easily understood format. For example, in the model presented on page 43, the lesson sheet contains in the first compartment statements which the pupil will repeat with the principal teacher. To the right are a series of models of problems which the student will also work with the broadcasting teacher. There is no word, no drawing, no exercise which will not be referred to in the broadcast and which is not oriented to the central learning experience of the lesson.

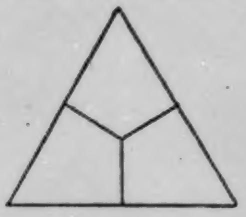
EJERCICIOS DE MATEMATICAS

(I.) En el siguiente cuadro se han indicado varias figuras divididas en partes iguales y con algunas partes en negro.

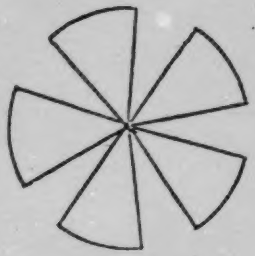
¿Qué fracción del total está coloreada en cada una? Completa el siguiente cuadro. Guiése por el ejemplo:

Gráfica	Partes Coloreadas	Total de partes	Fracción	Numerador	Denominad.
	1	2	$\frac{1}{2}$	1	2
					
					
					

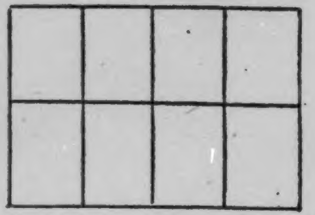
(II.) Ilumina las fracciones indicadas:



1/3 negro
1/3 punteado



1/5 negro
1/5 punteado



1/2 negro
1/4 punteado.
1/8 rayado

Escuelas Radiofónicas Santa María

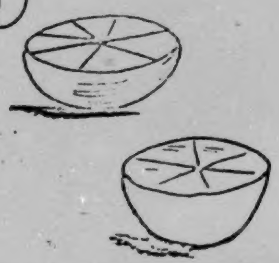
Alumno: ______________________________

CAS

CURSO	HOJA
4º	82

①

NUMEROS FRACCIONARIOS

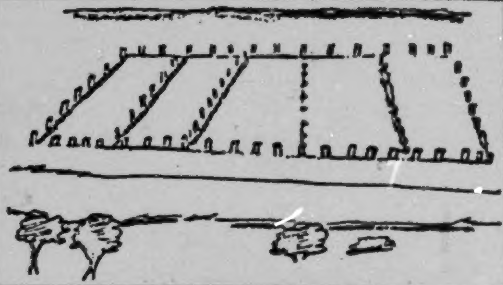


La naranja está *dividida* en 2 partes iguales.

Cada parte es ⇨ *un medio.*

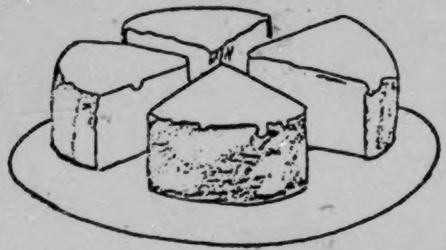
El terreno está *dividido* en 5 partes iguales.

Cada parte es ⇨ *un quinto.*



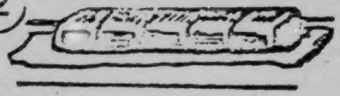
El pastel está *dividido* en 4 partes iguales.

Cada parte es ⇨ *un cuarto.*



Si una unidad se divide en partes iguales, cada parte es una unidad fraccionaria.

②



Un quinto

1 ⟵ NUMERADOR ⟶ **Número de partes representadas.**

5 ⟵ DENOMINADOR ⟶ **Número de partes en que se ha dividido la unidad.**

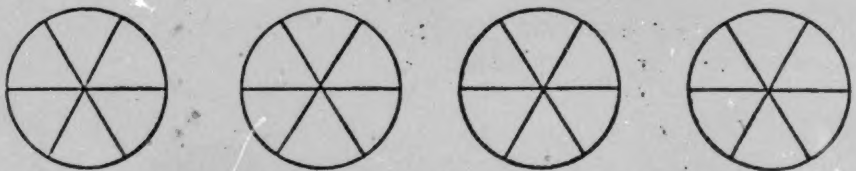
③

mayor que

9 > 5

menor que

2 < 7



$\frac{4}{6}$ ⬡ $\frac{3}{6}$ ⬡ $\frac{2}{6}$ ⬡ $\frac{1}{6}$

CUANDO DOS FRACCIONES TIENEN EL MISMO DENOMINADOR, ES MAYOR LA QUE TIENE MAYOR NUMERADOR

④

$\frac{5}{9}$ $\frac{3}{9}$ $\frac{4}{7}$ $\frac{2}{7}$ $\frac{4}{5}$ $\frac{6}{5}$

$\frac{2}{6}$ $\frac{5}{6}$ $\frac{3}{4}$ $\frac{1}{4}$ $\frac{5}{3}$ $\frac{4}{3}$

EL AHORRO ES LA BASE DE TODO, AHORRE EN EL BANCO POPULAR.

The format of the lesson sheet is of great importance since the student must be able to capture in a glance and follow with very brief explanation the logic and central point of the presentation. There is time to learn well only the essential matter, leaving to the life situation of the adult the filling in with further practical applications. The clear visual presentation must also take into consideration the poor lighting conditions of most homes in rural areas and the lack of private areas of study.

Each part of the lesson sheet--the standard symbols of the grade and subject matter at the top of the sheet, the subject matter at the beginning, the numbered compartments--must be carefully marked so that the student can be easily and rapidly guided through the material. Drawings are another important aspect of the presentation and replace otherwise extensive descriptive material in the lesson sheets or broadcasts. The drawings as well as the vocabulary and examples ideally flow out of real situations in the life of the adult, including racial and national characteristics typical of the student population. Again, all of this is arranged in a logical whole so that one part flows from the other leading to one central learning experience.

To insure that the learning process is an active search and not just a passive listening to the broadcast, a series of small completion exercises are built into the presentation: a word to be underlined or written into the text, a small diagram to be completed, a deliberate small mistake which the broadcast dialogue helps the student to detect and correct, etc.

Each lesson sheet is also the means of introducing new vocabulary to the student and care is taken that the sense of the word grows out of the content, building on previous words and concepts which have been introduced as well as the typical vocabulary of the student population.

The exercises on the back side of the class summary contain the same kind of question which the student will encounter in the examinations: multiple choice, completion, response, etc. They also include questions for reflection which are related to the central theme of the week. The exercises, which are worked for the most part during the half hour of the broadcast not dedicated to explanation, are the basis for the field teacher's diagnosis of the comprehension and progress of the student.

The Technique of the Broadcast Classes

For the broadcast classes, in order to preserve the spontaneity of the class exposition, no written script or set of guides is prepared. After the lesson sheets have been prepared and printed, the broadcasting teachers form teams of a male and female voice and together they enter into a teacher-student dialogue. Thus, the class is not simply an exposition but a conversation in which one part asks a series of questions and, in general, plays the role of the inquiring student working with the lesson sheets. This contributes to the atmosphere of the active student posing questions, discovering the answers, and building a logical pattern of thought. The animated conversation of questions and answers with an occasional little joke between a male and female "first name" is also a much more pleasant and attractive experience than a direct, monotonous exposition. It establishes a one-to-one relationship with the student and a level of personal involvement that is difficult to reproduce in a larger class context. Some subjects, especially the central theme, the reading lesson, and social studies, lend themselves to a small radio drama with special sound effects and musical background. Since the broadcasting teachers work with a studio technician in the recording of the class for later broadcast, the details of timing, sound level, musical inserts, sound effects, and final mounting on a tape to be delivered to the broadcasting studio are handled by the technician.

The broadcast classes of one hour for each grade alternate between two grade levels so that while the explanation of the material is being given to one class, the other is completing some of the exercises on the back side of the lesson sheet. The broadcast begins with the musical introduction of the radiophonic schools as a signal for the beginning of classes and then moves to the special musical introduction which is the call to the students of, for example, third grade. The broadcasting teacher quickly assigns to the third grade a handwriting exercise and then turns to the explanation of the first subject matter for the fifth grade. The class dialogue begins with a brief review, development of new words, the exposition of the basic material, the relation of the material to the drawings, the recapitulation of the exposition, and, finally, a brief assignment of exercises on the back side of the lesson sheet. The broadcasting team then leaves the fifth grade working for approximately eight minutes to take up the exposition of another subject with the waiting third grade. When the part of the lesson sheet to be covered that day is explained, the characteristic musical introduction sounds, calling the other course back to class for a further period. Thus, in one hour it is possible to present seven classes of eight minutes, four for one grade level and three or four for another grade level.

The Process of Composing the Lesson Sheets and Broadcasts

One of the major advantages of the radiophonic system is that, with a relatively small number of qualified and experienced teachers, it is possible to prepare the lesson sheets and broadcast classes for an indefinite number of students. For the simultaneous preparation of four grade levels, Radio Santa Maria maintains a staff of five broadcasting teachers and two artists in addition to the director of the teaching staff who also prepares some of the classes. As much as is possible, each of these teachers specializes in a particular subject for all grade levels so that the material is vertically integrated.

Most of these teachers are professional educators with at least some training in education at the university level.

Although some have had direct classroom experience, this is not seen as essential since the broadcasting experience is significantly different from that of the classroom. Some of the most desired characteristics in the teacher, in addition to technical competence, are a high degree of social awareness (in order to integrate the central theme); a deep personal commitment to the students, largely of peasant background; and involvement with youth organizations. Broadcasting teachers are expected to visit rural communities in their spare time and to observe students at the time of classes.

Although theoretically it is possible to develop a final edition of the lesson sheets and the broadcast classes, over the past five years, Radio Santa Maria has preferred to produce a new set each year, continually improving the lessons on the basis of the experience of the previous year. Since the teaching staff maintains a constant feedback on the students' comprehension of material through the weekly reports of the field teachers and the visits of staff to sectors, it is possible to adjust the lesson and exercise sheets and broadcast classes week by week. In this way it is also possible to make the content of the lesson sheets much more contemporary and to interrelate the central theme with the current events of the country. However, as the lesson sheets have been perfected, it has been possible to use much of the material again, drawing from those of previous years.

At present, the schedule for the production and distribution of the weekly lesson sheets to the students covers approximately one month.

The process begins with a meeting of the broadcasting teachers to discuss the material each will cover in that week, the feedback on student problems, looking ahead to important contemporary events which might be of importance in composing the study materials, the coordination of the various subject matters with the central theme of the week, and other planning matters. This coordination contributes to the horizontal integration of the material for the student.

The class summaries of one subject (or more) for the four grade levels are the responsibility of a particular broadcast teacher over the time of a week. However, as the broadcasting teacher designs the lesson sheets and exercises, he or she checks with another teacher and with the director for its clarity and accuracy of presentation.

This staff has the added advantage, in composing the lesson sheets, of a complete reference library and samples of the best textbooks used throughout Latin America for consulting during all stages of the preparation. Early in the design, the teacher also discusses the artwork and diagrams with the staff artists so that by the end of the week all parts of each lesson are ready for mounting on a master to be sent to the printing department. In the week following the printing, the broadcasts are recorded so that in three weeks, all is printed, recorded and readied for distribution to the field teachers.for the weekly interchange with students on the following weekend.

Conclusions

At least four aspects of the educational methodology in the radiophonic system of Santa Maria provide significant adaptations of concepts of lifelong education:

1. The program is designed as a response to a quite specific need of young rural and lower-status urban adults for an accelerated upper primary and secondary education in order to gain access to technical and professional positions and to positions of rural leadership. By dispensing with conventional classroom methods, not only is education made available to those otherwise deprived but with superior instructional materials (texts, exercise workbooks) and quality teaching at low cost.
2. Both the lesson sheets and the broadcast classes train the student to be not simply the passive receptacle of information, but active and creative in discovering knowledge and fashioning this into a personal integration. This educational methodology creates attitudes and skills for seeking out and integrating learning experiences throughout a lifetime.
3. While maintaining great flexibility, an artful and economical combination of correspondence courses, broadcast classes and group discussion has been achieved so that the learning process involves the whole human personality: audio-visual, oral and written expression, challenge of curiosity, logical argument, personal integration and a critical relationship with social reality.

4. Through the central theme the attempt is made to relate the learning experience to the process of social change in the community and the nation, develop a critical awareness of the forces operating in the social reality, and prepare students for an active participation in organized efforts toward social change.

Perhaps the major problem in adapting concepts of lifelong education is that all who are involved--broadcasting teachers, field teachers, and the students--have their original educational experience in quite traditional methods, and the graded structure necessarily links the program to the complex of traditional educational institutions. A virtual re-education is necessary at all levels to overcome the motivations to accumulate a disintegrated amount of information to pass examinations and, thus, to obtain a certificate which is the ticket for socio-economic advancement.

The methodology encounters special difficulties when the student body spans an age range from adolescents to mature adults. The technique of the central theme faces a major problem in the great age differential. Also, the central theme may not be well integrated with the life situation of the students and with the subject matter without a thorough change in the method of selecting matter for the curriculum and without a complete reorganization of the curriculum. Finally, the structural conditions of the country, which influence the motivations of students, may make the central theme technique difficult, even futile.

CHAPTER III

THE FIELD TEACHER AND THE STUDENT IN THE RADIOPHONIC "SCHOOL"

Although the radiophonic system of Santa Maria permits the student to take the classes in the home, the communitarian aspect of the learning experience is emphasized in the grouping of students around a field teacher to form a "school" or sector. The field teacher is meant to supplement the lesson sheets and the broadcast classes, but as this study progressed it became apparent that the field teacher has a most important role beyond simply answering questions, namely, establishing group norms of lifelong education and linking the educational experience with the community.

The Field Teacher

The field teacher, as in the case of other forms of radiophonic schools, serves as a supplement to the broadcast classes and as the administrative link between the central office and the student. However, given the central importance of the weekly lesson sheets, the essential work of the field teacheer is defined as helping the student with doubts that remain after the broadcast explanation of the lesson sheets. In the terminology used by Radio Santa Maria, the field teacher is called a _maestro corrector_ or "correcting teacher," that is correcting the exercises of the students and answering questions in the weekly meeting with students.

The three requirements for field teacher are an academic level at least two years above the grade level being taught (in effect, the second year of secondary school or equivalent levels of capacity), personal maturity and reliability, and demonstrated leadership in the community. Although originally a preference was shown for teachers in the public primary schools in rural communities, experience has shown that some of the best field teachers are young people, 21 to 23, who are finishing secondary school and who are leaders in the youth movements of the area. Some of the older public primary school teachers have tended to be less well trained and much more traditional in their views while young people, although sometimes lacking the teaching experience, are quick to grasp the principles of lifelong education and are more apt to integrate the learning experience with the life context of the young students. It is becoming increasingly common for eighth grade graduates of the radiophonic schools who are now advanced secondary students to become field teachers and these are looked upon as very good candidates.

In the random sample of thirty-three sectors, the field teachers were asked to fill out a questionnaire on personal background and attitudes toward the radiophonic schools. The average field teacher is young with the median age at 23.5 years, unmarried (72.7), and many are presently secondary school students (43.3 percent). Another 33.3 percent are public primary school teachers; only 13.3 percent are farmers or involved in other occupations. The level of education is relatively high for rural areas: 84.8 percent have at least some secondary school education and 33.3 percent have secondary or more education completed. Of the 36 percent who are, or have been, teachers in the public primary school system, nearly half have three or four years of experience. Most of the field teachers tend to be actively in community organizations: 78 percent in religious organizations, 54 percent in youth clubs, and 60 percent have occupied some formal leadership position in these organizations.

Thus, the typical assistant teacher is a young secondary school student or primary school teacher recently graduated, actively involved in community organizations, who has volunteered, often at the behest of the local pastor or the supervisor of the radio schools, to help fellow youth to improve their educational level. Some radiophonic schools are promoted by the youth organizations as a group activity.

The small remuneration of US$.15 from the .25 which the student pays each week upon receiving the weekly lesson sheets is also a motivational factor for the field teacher. The US$6.00 per week which the field teacher may receive from a typical sector of forty students is far from any kind of regular income, but it compensates for the average of six to ten hours a week spent in this and it covers the small expenses of travel or postage involved in communicating with the central office. The remuneration also encourages the field teacher to seek a larger number of students to make his or her time more worth while. Most important, it commits the field teacher to provide a service to the student and gives the student, who is commited to more dedicated study by the small monetary investment, the right to complain if the field teacher does not render the service expected.

In organizing a network of field teachers an attempt is made to locate candidates in a spot of greatest accessibility for a given number of students. If field teachers with the proper qualifications are difficult to find, students may come in for the weekly meeting from distances of five or ten kilometers.

Radio Santa Maria offers no training or motivational courses for the assistant teacher, not even an initial introductory course on the methods and goals of the radiophonic schools. A somewhat detailed instructional booklet is distributed to each field teacher upon accepting the position, and the field supervisor gives some explanation stressing key duties which field teachers are likely to be lax in and clarifies doubts. The training is primarily "in service": through the frequent "circular letters" which are sent out by the central office in the weekly package of lesson sheets, the weekly Saturday program for field teachers, the occasional visits of the supervisor, and the zone meetings of field teachers with the supervisor or central office staff approximately once every semester. The system of circulars and Saturday programs is so tightly organized that if the field teacher does not follow them closely, there are problems in the progress of the school and pressure from the students. However, the results from an introductory training course of three days, given on an experimental basis, has indicated that the efficiency of the field teachers, their her identification with the educational methods and goals of the Santa Maria system, and, especially, their capacity for directing the weekly discussions of the central theme would improve noticeably if such courses were given. At present, there is considerable inconsistency in the methods of the field teacher and this is undoubtedly affecting the academic achievement of the students.

Duties of the Field Teacher

1. Enrolling the Student

Most field teachers do some recruiting work to insure the recommended number of 20 students to form a sector, but any qualified student must be accepted. Students may enroll in whatever grade level they think they are capable of following, but usually that following the last grade level which they have successfully completed. Enrolling students need not present records of previous grades completed except those enrolling at the seventh and eighth grade level who must show the official primary school certificate. There are no placement examinations, but if there is any doubt about the level of capability of the student, the field teachers are to encourage the student to begin at a lower level and then move up before the enrollment period is closed if that is warranted.

The student pays an enrollment fee of US$.75 to cover the expenses of the central record office and to encourage the students to make a serious commitment to study before enrolling. The field teacher is supplied with two record cards, white and pink in color, for all future data on student progress. The field teacher retains the pink card and sends the white card to the central office which, sends back a small "carnet" or identification card with the student's permanent number.to be used in all examination papers, etc. If a student withdraws, the pink card held by the field teacher is returned to the central records department; if the student enrolls again later, the same pink card with the same identification number is sent back to the field teacher for as long as the student is actively enrolled.

The enrollment period is presently held open until approximately two weeks before the mid-semester examination so that students who may be involved in migratory labor or who decide late may not miss the course and have to wait a full year to enroll. If a student enrolls late, the field teacher is asked to give individual help in reviewing material already covered. If a student must move out of the community to another part of the country during the course, he or she only needs to find a nearby field teacher in the new location and continue the course.

2. The Weekly Interchange of Field Teacher and Students

Once a week, theoretically at any convenient time but usually on Saturday or Sunday, the students meet with the field teacher to ask questions and to discuss as a group the central theme of the week. The instructions for the field teacher recommend that about three hours be allowed for 100 students distributed in six grades, but some field teachers give up one one whole day to a sector of sixty students while others were observed to spend about thirty minutes superficially answering questions. The field teacher is required only to respond to questions the students may ask, but the aggressive students tend to take the teacher's time and the field teacher must be skillful to diagnose the problems of the more quiet and often slower students. Most of the time of the interchange is spent on the more difficult subject matters such as mathematics, and in these areas field teachers may give a complete class reviewing the material on the lesson sheet.

After answering questions on the various subject matters, the field teacher is required to spend at least one half hour leading a discussion on the central theme. However, if the field teacher is not particularly socially aware and the students not interested, it is easy to spend all of the time on the subject matters. Observations of the interchanges indicate that many field teachers lack elemental skills in leading group discussions and that they sometimes do not understand the significance of the particular central theme. Nevertheless, these discussions are increasingly becoming a successful and integral part of the weekly interchange, especially when both students and the field teacher are involved in community organizations.

At the end of the interchange the students pass the weekly fee of US$.25 to the field teacher and pick up the following week's lesson sheets. Experience has shown that, as long as the field teachers are firm in not distributing the study materials to students who are not faithful in this monetary contribution, the system of payments presents no difficulty.

3. Correcting the Student Exercises on the Lesson Sheets

During the interchange, the field teacher is expected to pick up the exercises written on the back of the lesson sheets, review them during the week to determine the student's progress, and pass them back to the student at the next weekly interchange. However, it appears that in practice many of the field teachers do not correct the exercises of the students during the week because, with forty to seventy students, they do not have the time. Many prefer to look over each student's work briefly during the interchange to check that it is done or they may correct the student exercies in a general class discussion. At the time of the examination, a longer intensive review is held in which student problems may be solved.

4. The Weekly Report

On the Monday following the interchange the field teacher is expected to send in to the central records department or to the office of the regional subcenter by mail or whatever means is convenient a form stating the exact number of lesson sheets needed for each grade the coming week. On this form is noted the number of students of the former week, the newly enrolled students, and the withdrawals. Thus, the central office knows exactly from week to week how many students are enrolled in each grade so that the exact number of lesson sheets may be printed and distributed.

Since the field teacher is expected to pass to the central office ten cents for each lesson sheet sent out or return the excess lesson sheets to the central office, it is in the interest of the field teacher to know as quickly as possible that a student is withdrawing and to avoid the trouble of sending back lesson sheets--or to pay for them out of his or her own pocket.

The weekly report form also has a space for other comments, and the field teachers are asked to note especially the problems the students are having with the lesson sheets and the broadcast classes or other problems. On the basis of these weekly reports, immediate adjustments in the instructional materials or other aspects of the program may be made.

5. Passing Collected Fees to the Central Office

Once a month the central office sends to the field teacher a statement detailing how many students are reportedly enrolled in the sector, the number of lesson sheets and examinations sent out, and the exact amount which is to be sent by mail or delivered personally to the central or regional office. If a field teacher allows the bills to go unpaid for two months, he or she is invited to the central or regional office to sign a contract for regular payments. If the field teacher is completely disorganized in the payments, this is usually associated with a general state of disorganization in the sector, and steps are taken to replace the field teacher. As long as the central records department is prompt in detecting negligence, there are rarely serious problems, and over the years the default (discrepancy between lesson sheets sent out and payments made) is about 15 percent.

6. Giving the Examinations

The field teacher is responsible for giving, correcting, and grading the two examinations prepared by the central office for each course. Along with the examinations a form is sent for each grade level in the sector on which the field teacher is to write the names, identification numbers, and the examination grades for each subject. The central office also provides an answer guide for correcting the examination and for alloting the number of points to be given to each correct answer. To insure uniformity in this grading with hundreds of field teachers, the examinations tend toward closed answer questions.[1] These forms are returned to the central office, and the final course grades are calculated by the central records staff.

In the case of the general examinations at the end of the primary school (sixth grade) and the intermediate level (eighth grade), for which officially recognized certificates are issued by the Secretariat of Education, the field teacher must assemble the required witnesses and follow the procedures stipulated by the Secretariat of Education. The official grade forms with requests for certificates are submitted to the Secretariat of Education directly from the central records department of Radio Santa Maria.

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[1] Samples of the sixth and eighth grade examinations are found in Appendix IV.

The two examinations are, in practice, the most exacting of the field teacher's duties. Most prepare the students with a relatively thorough review taking much more time than the ordinary weekly interchange, and the sixth and eighth grade examinations alone are held over a period of a week with a considerable amount of time required for correcting and recording grades to be sent into the central office.

7. The Saturday Instruction for the Field Teachers

Since much of the supervision and training of the field teachers is carried out through the first half hour of the Saturday evening broadcast at the time of the ordinary radio school class, field teachers are required to listen to this broadcast. Reports on progress in certain areas of the radiophonic schools or discussions of general policy bring the field teacher into more intimate contact with the central office.

Student Requirements

In compliance with requests from the Secretariat of Education, students must be at least fourteen years old unless there is no alternative educational opportunity easily available. Once enrolled, the student is expected to be present for the weekly interchange to pick up the lesson sheets (not at the home of the field teacher), follow the broadcasts faithfully, and to bring the completed exercises to the weekly interchange. If the student is failing in this, especially in attendance at the weekly interchange, the field teacher has the right (and is encouraged by the central office) to unilaterally terminate the student.

The total monetary contribution of a student for a single grade course is US$7.00: .75 for enrollment, .25 for each of the two examinations, and .25 per week over twenty-three weeks. Since the payments are spread out over a period of time and are, in all, equivalent to three and a half days work at minimum wages in the Dominican Republic, they are not an obstacle except in the 15 to 20 percent of the families where there is unemployment or very unsteady employment.

Conclusions

The field teacher adds a dimension to the radiophonic schools essential in lifelong education: the student's access to some individual guidance. Ideally, the field teacher is following the progress of each student, resolving doubts that are left from the broadcast classes, and is providing structured evaluation through the correction of exercises, the examinations, etc. With a student body still very young, the field teacher is also influential in knowing how to combine the various learning experiences, in habits of study, in the attitudes toward different subject matters, and in the integration of the material with life experience. The field teacher, often of the same age group as the students, offers a personal role model in attitudes connected with lifelong education.

The weekly interchange, with the discussion of the central theme, provides another important dimension of education: the expression of personal views regarding questions of human values and social issues in a group context and the development of critical social awareness in the students. Insofar as the radiophonic schools are linked with community organizations, the discussion of the central theme often leads into community action.

The system of weekly reports of the field teacher is a means of continual feedback to the central office so that adjustments to student needs may be made rapidly.

In the evolution of the system of radiophonic schools of Santa Maria most attention has been given to the perfection of the lesson sheets and broadcast classes. The field teacher plays a very important role, especially with younger students, and it appears that greater attention must be given to the selection and training of the field teacher. Significant inconsistencies in the manner of conducting the interchange are observed and also weaknesses in the direction of the central theme discussions. Since the regular correction of the weekly exercises is so time consuming, systems of more rapid and efficient regular diagnosis of student progress must be devised so that individual student guidance, in so far as this is needed, is made possible.

CHAPTER IV

THE INTRODUCTION, SUPERVISION, AND CENTRAL ADMINSTRATION OF THE RADIOPHONIC SCHOOLS

Having presented in some detail the six major learning experiences constituting the educational process of the radiophonic schools of Santa Maria, the following chapter describes briefly the systems of introducing the radiophonic schools into a new area, the supervision of the sectors, the rapid printing and distribution of weekly lesson sheets, and the central administration.

Introducing the Radiophonic Schools into a New Area

It is important in systems of lifelong education that the educational opportunities be made available rapidly on a nationwide basis in order to respond to the educational needs of the people. This often requires a mass promotional effort to create an awareness of the existence of the educational opportunities, overcome doubts and prejudices regarding often very unconventional educational methods, and, in the case of a system which depends on auxiliary field teachers, recruit the necessary personnel. In extending the radiophonic schools throughout the Dominican Republic in little more than four years so that a primary and intermediate level education is available in the most remote rural communities, Radio Santa Maria has developed a series of approaches which are, in effect, an education in a new concept of education.

Having once determined with some study the programs which respond to the educational needs and motivations of different population groups, it is important to plan carefully the orientation of the initial promotion according to the population and the objectives. For example, if the promotion is directed toward the potential student, the objective is to provide motivation regarding the concrete advantages of further education, general information which will overcome doubts and prejudices (that it is possible to obtain the officially recognized degree, etc.), and specific information on how to enroll, how to find a field teacher, when to enroll, the class schedule, etc. If the objective is to discover field teachers, the orientation is toward service motivation, the possibility of remuneration, and more detailed information on the field teacher's duties.

In general, promotion efforts have been most efficient if they are aimed at first discovering individuals capable of serving as field teachers since these are the most effective leaders in creating a new consciousness regarding education and are motivated toward having the largest possible number of students.

Radio Santa Maria has made a special point of entering new areas through the existing structures of social service which have a high degree of acceptability and legitimacy.

The local parish priest, the leaders in a cooperative, or the youth clubs often are aware of potential candidates for field teachers, and are interested in the radiophonic schools for making their own work more effective. If the radiophonic schools are linked with these organizations from the outset, it is more likely that they will serve as the educational extension of the more formal graded learning process.

The public primary school teachers are often an important means of introducing the radiophonic schools in rural areas. Although some have no ties to the community they are assigned to and may have difficulties in adapting to innovative, flexible educational methods, they are often the most educated person in isolated rural areas.

Another important means of introducing the radiophonic schools is through the mass media itself: the radio, the television, and the newspaper. As an educational-commercial station, Radio Santa Maria can use its daily programming facilities for promotional announcements, campaign efforts, and for gradually introducing a new educational culture. Radio Santa Maria maintains a continued program of public relations announcing the progress of the radiophonic schools, the number of students graduated, individual human interest incidents, and external recognition in order to continually validate the educational innovations before the general public.

In short, by carefully defining objectives, working through the existing organizational structures, and through the mass media, it is possible to enter a new area very rapidly, with a relatively small number of promotional personnel, and, afterwards, reduce the number of supervisory personnel because of the support of the existing organizations.

Field Supervision

Radio Santa Maria is able to maintain a relatively high level of responsibility and effectiveness in the more than 520 field teachers scattered in remote areas with a very small field supervisory staff because of its system of selecting and motivating field teachers, the system of weekly reports and other contacts with the central records department, and the careful coordination of the work of field supervisors with the central records department.

By allowing the students to receive daily broadcasts in the home and requiring an assembly of students only once a week for a somewhat longer period of time, fewer field teachers are necessary than in many radiophonic systems. This permits a more careful selection of the available candidates and enables the central or regional offices to know the capacities and weaknesses of each field teacher well, thus reducing the supervisory needs.

Since the students are paying a small fee and know well what the duties of the field teacher are, they are often the first to report to the central office by letter or direct visit when a field teacher is not providing the service expected.

And since the field teacher is not purely a volunteer, both students and the central office are in a position to demand more exact performance.

The major work of supervision is carried out by the central records office which is receiving the enrollments, the weekly reports, the examinations, and the monthly payments from the field teacher. Experience has shown that one of the best indicators of the general effectiveness of a field teacher is the regularity and completeness of the weekly reports and, especially, the regularity of the monthly payments. Field teachers are accustomed to briefly note the successful or unsuccessful aspects of the lesson sheets or other problems which are arising on the weekly reports. Many of the field teachers occasionally visit the central office or the regional offices. When the central records department detects the possibility of a problem in a sector, the field supervisor is asked to visit the sector, attempt to help the field teacher, or, if necessary, begin the process of selecting candidates for a replacement.

Through the system of circular letters sent out with the weekly distribution of lesson sheets as well as the Saturday program for field teachers it is possible to keep field teachers regularly informed with fewer meetings or personal visits. The central office staff also periodically visits the sectors and gradually become acquainted with the field conditions in various parts of the country. The broadcasting teachers also a number of students to provide steady feedback on the positive points or problems in the lesson sheets or radio explanations. Finally, the fairly rigorous system of reviews and midterm examinations are a form of continuous evaluation for both the field teacher and the central office.

In addition to the occasional problem solving visits, the field supervisor attempts to visit each field teacher at least once every calendar year and to hold periodic meetings (once every semester) with the field teachers of a particular zone. However, at present, Radio Santa Maria has only three supervisors for approximately 520 sectors with an enrollment of 11,000 to 12,000 each semester, and the field supervisor for the central zone is, alone, responsible for approximately 350 sectors. His time is completely occupied with problem solving visits and replacing field teachers so that some sectors have not been visited for years. It is notable that sectors function as well as they do with this little supervision.

One of the major duties of the field supervisor is the replacement of field teachers: visiting the community to enquire regarding possible candidates, examining the candidates, instructing the new field teacher (virtually the only direct instruction the field teacher receives), and then visiting occasionally to insure that the new field teacher is functioning properly. Even with a very efficient director of the central records department doing much of the supervision from the central office, a more adequate ratio of supervisors would be one supervisor for 75 or, at most, 100 sectors. And if supervisors are to be involved in giving initial short training courses for field teachers, the ratio would be one for every 50 or 60 sectors.

Weekly Distribution of Lesson Sheets to the Students

Although it is quite possible for a radiophonic system such as that of Radio Santa Maria to distribute a complete set of lesson sheets to the field teacher at the beginning of the semester and allow the field teacher to give them to the student week by week, Radio Santa Maria has preferred to compose, print, and distribute lesson sheets week by week. Because enrollment is open until nearly midsemester and the number of lesson sheets needed may vary considerably from week to week, there are considerable economies in printing only the exact number of lesson sheets required for each week. If the lesson sheets are composed week by week, they can be made much more contemporary and can respond to feedback from the field. Finally, problems in the payment and passing fees to the central office are avoided with the present system.

Since the field teacher is required to make a report each Monday after the interchange indicating the number of lesson sheets needed for the following week, these reports (or a recent report) are usually in the hands of the central records department by Friday and the orders for lesson sheets from each sector (or the total number for each regional office) are passed to the printing department. At present, Radio Santa Maria has equipment for printing and folding lesson sheets for 25,000 students in approximately three days. Thus, in the period from Friday to Wednesday, the printing department has printed, folded, and wrapped in individual packages the number of lesson sheets each sector needs for each grade.

Since the postal system of the country does not function with the rapidity necessary to insure prompt weekly delivery of the study materials, Radio Santa Maria has its own delivery system. In the central region where the office of the producing staff and the printing department are located, a driver covers a route in one day delivering the packages of lesson sheets (each addressed) directly to a small store, a parish center, or to some trusted person where the field teacher may pick them up in time for the interchange on the following day.

In the case of the two regional subcenters in more remote parts of the country, the requests for lesson sheets in the weekly reports of field teachers are collected at the subcenters and only the total number of lesson sheets needed is forwarded to the printing department. The lesson sheets are shipped by public transportation to the subcenters on a Wednesday or Thursday. There they are packaged and readied for dispatching to the field teacher on the Friday before the weekly interchange.

General Administration

The organization of the general administration embodies the same principles which guide the overall system of Radio

Santa Maria: 1) the maximum simplicity so that the administration can function reasonably efficiently with personnel of ordinary capacity (that is, without unusual talents or training); 2) concentration in a central office with systems of continual feedback from the field to reduce field supervisors and overall costs; 3) a relatively systematized set of functions so that, under conditions of a reduced budget, one person can carry out several administrative functions; 4) a design which permits expansion of enrollment without increasing administrative personnel and thereby keeping down overhead costs per student.

Basic policy is established by a governing council or board of directors which, presently in Santa Maria, is made up of the Jesuit personnel working in the radio station and the radiophonic schools.[1] Like many public and private institutions of this type, Radio Santa Maria has not discovered a formula to allow greater participation of the staff and/or representatives of popular organizations which exist among the largely rural clientele of the radio station and the radio schools. However, as a private institution, Radio Santa Maria has considerable freedom in developing a policy quite open to innovation, and both the Jesuit and lay staff maintain a great deal of direct contact with rural communities and rural leaders.

The administration is organized in terms of a general director and four separate departments: the teaching staff,

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[1] The ultimate decision making is vested in the Roman Catholic bishop of La Vega, but his influence in policy is, at most, general and indirect.

Figure 4.1 The Distributions of Functions and Personnel in the Administration of the Radiophonic Schools of Santa Maria(cont.)

Department of Promotion and Supervision

1. Introducing radiophonic schools into new regions and promoting new sectors.
2. Selection and training of field teachers.
3. Supervision of field teachers.
4. Supervision of functioning of regional subcenters.
5. Detailed planning of publicity.
6. Planning graduation exercises and other public functions.

Personnel: Director, 2 teachers of subcenters, 2 to 3 supervisors.

Department of Printing and Distribution

1. Printing, folding, and packaging of lesson sheets.
2. Distribution of lesson sheets.

Personnel: Director of printing, 2 assistants, and 1 driver.

General Director

1. General planning and policy making.
2. Financial planning and obtaining of finances; budget review.
3. Supervision of general accounting of the institution.
4. Coordination with the Secretariat of Education and other governmental agencies.
5. Coordination with various agencies and organizations in areas where radiophonic schools function.
6. Public relations and general planning of publicity.
7. Coordination with other systems of radiophonic schools in Latin American Association of Radiophonic Schools (ALER).

Personnel: General director, executive Secretary, accountant.

Figure 4.1 The Distributions of Functions and Personnel in the Administration of the Radiophonic Schools of Santa María (cont.)

Department of Promotion and Supervision

1. Introducing radiophonic schools into new regions and promoting new sectors.
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1. General planning and policy making.
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3. Supervision of general accounting of the institution.
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5. Coordination with various agencies and organizations in areas where radiophonic schools function.
6. Public relations and general planning of publicity.
7. Coordination with other systems of radiophonic schools in Latin American Association of Radiophonic Schools (ALER).

Personnel: General director, executive Secretary, accountant.

central records (*administración*), promotion and supervision, and printing and distribution. The distribution of functions and the recommended personnel for the radiophonic schools (exclusive of the broadcasting station) at its present size, approximately 520 sectors and 22,000 annual enrollment in eight grades, is given in Figure 4.1. This is slightly above the actual personnel since one person is presently directing the teaching staff, central records, and supervision; and the number of supervisors is presently three instead of a recommended four or five.

A fuller financial analysis is given in Chapter VIII with the costs of a radiophonic system such as that of Santa Maria compared to the costs of an adult education program using conventional classroom methods. However, in the last full calendar year available, 1975, the total expenditures in the radiophonic schools of Radio Santa Maria were US$84,000. This includes seventeen full-time and three part-time employees, all paper and printing supplies, and transportation. The figure of $84,000 represents money spent, not the real costs, since broadcasting time, for example, is largely donated.

In 1975, 11,937 students completed examinations and were promoted so that the total cost per student promoted was US$7.03. Approximately 60 percent of the costs were covered by the student fees ($3.55 of the $7.00 student fee per course are passed to the central office), 15 percent by a monthly subsidy of $1,000 from the government of the Dominican Republic; and the other 25 percent by contributions from the advertizing sold in the broadcasting station. If approximately US$15,000 were added for the recommended additional personnel and US$10,000 for a 12 percent inflation rate, the total expenditure of the radiophonic schools would be US$109,000 or approximately US$8,00 per student. This is the cost to the central office and does not include the $3.45 which remains with the field teacher.

Conclusions

The system of radiophonic schools of Santa Maria maintains a relatively high level of effectiveness at lower costs largely because of the design of the educational program, but also because of the efficiency of the administration and supervision. By working in close coordination with existing organizational structures in rural areas, through the mutual commitment of students, field teachers, and central office established by the monetary contributions of students, and the system of weekly and monthly communications from field teachers to the central office, the number of administrative and supervisory personnel can be greatly reduced in comparison with many such systems. This implies a reduced cost per student and the ability to offer better services to a great number.

CHAPTER V

EXPANSION OF SECTORS, ENROLLMENT, AND STUDENT PROMOTIONS IN THE RADIOPHONIC SCHOOLS OF SANTA MARIA: 1971 TO 1975

An important institutional aspect of lifelong education is the ability to extend an educational opportunity rapidly to meet a large-scale demand on a national level. In a period of four years, the radiophonic system of Santa Maria has been able to make a primary and intermediate level education available in all but seven provinces of the Dominican Republic. The present chapter presents a brief statistical analysis of the expansion of the number of sectors, students enrolled, and students promoted from the initial scholastic year of 1971/1972 to the most recent complete scholastic year, 1974/1975.

These statistics over four years reveal some of the problems and necessary adaptations which a rapidly mounted system may encounter. The enrollment statistics also indicate what grade levels are in most demand and what is the longer term growth potential at the primary and intermediate level.

Three statistics have been taken into account in this analysis: 1) the initial enrollment as measured by the week of highest enrollment during the semester; 2) the number who persevere through the semester and present themselves for final examinations, and 3) the number who pass the examination and are promoted or, in the case of the sixth and eighth grades, receive a primary or intermediate level certificate. Determining the exact number of initial enrollees offers some difficulty in the Santa Maria system since enrollment is held open for at least ten weeks and, in the past, up to three months. Usually enrollment continues to increase during the semester as long as enrollment is open and then declines in varying degrees until the examination. Although it is possible that while some students are enrolling others are withdrawing early, the "high week" is the best indicator of the total initial enrollment because students usually persevere up to the "high week", which coincides with the closing of enrollment and the midterm examination. The midterm examination serves as the first evaluation of the student's general seriousness of intent and students who withdraw usually begin to do so after this examination.

The Initial, Experimental Year: 1971/1972

Before the introduction of the present system of radiophonic schools, Radio Santa Maria already had been operating a literacy program since 1964 so that there was already some acquaintance with radiophonic schools in the area. Nevertheless, the initial enrollment of 12,238 and the approximately 6,823 promoted indicate a rapid response to this opportunity.[1] In this year, Santa Maria concentrated on the primary level, offering a fourth, fifth, and sixth grade course in both first and second semester.

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[1] Since the system of statistics of the radiophonic schools of Santa Maria is somewhat incomplete in the first year, the number promoted is approximate.

Table 3.1 : Increase of Sectors, Initial Enrollment, Students Examined and Students Promoted in the Radiophonic Schools of Santa Maria: 1971/1972 to 1974/1975

1971/1972

Sectors: 1st Sem. 102 2nd Sem. 207

Grades:	High Week	Examined	% Exam.	Promoted	% Fail.
First					
Second	1,335	676	(50.6)	603	(10.8)
Third	1,018	430	(42.2)	358	(16.7)
Fourth	3,759*	2,035	(54.1)	1,643	(19.3)
Fifth	2,674*	1,591	(59.5)	1,353	(14.9)
Sixth	3,452	2,091[1]	(60.6)	1,856	(11.2)
Seventh					
Eighth					
TOTAL	12,238	6,823	(55.7)	5,813	(14.7)

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* Represents two courses in one year.

[1] Based on extrapolation due to faulty data.

Table 5.1 : Increase of Sectors, Initial Enrollment, Students Examined and Students Promoted in the Radiophonic Schools of Santa Maria: 1971/1972 to 1974/1975

	1972/1973				
Sectors:	1st Sem. 229			2nd Sem. 289	
Grades:	High Week	Examined	% Exam.	Promoted	% Fail.
First	1,017	555	(54.6)	463	(16.6)
Second	1,030	543	(52.7)	467	(14.0)
Third	2,504	1,415	(56.5)	1,201	(15.1)
Fourth	2,495	1,526	(61.2)	1,314	(13.9)
Fifth	3,598	2,485	(69.1)	2,214	(10.9)
Sixth	4,605	3,681	(79.9)	3,110	(15.5)
Seventh	2,903	2,430	(83.7)	2,277	(6.3)
Eighth	4,223	3,059	(72.4)	2,869	(6.2)
TOTAL	22,375	15,694	(70.1)	13,915	(11.3)

Table 5.1 : Increase of Sectors, Initial Enrollment, Students Examined and Students Promoted in the Radiophonic Schools of Santa Maria: 1971/1972 to 1974/1975 (cont.)

1973/1974

Sectors: 1st Sem.: 406 2nd Sem.. 391

Grades	High Week	Examined	% Exam.	Promoted	% Fail.
First					
Second					
Third	2,657	1,100	(41.4)	960	(12.7)
Fourth	2,245	1,200	(53.4)	962	(19.8)
Fifth	5,447	2,869	(52.7)	2,582	(10.0)
Sixth	4,321	3,383	(78.3)	3,051	(9.8)
Seventh	3,635	2,094	(57.6)	1,949	(6.9)
Eighth	1,865	1,044	(56.0)	972	(6.9)
TOTAL	20,171	11,690	(58.0)	10,476	(10.4)

Table 5.1 : Increase of Sectors, Initial Enrollment, Students Examined and Students Promoted in the Radiophonic Schools of Santa Maria: 1971/1972 to 1974/1975 (cont.)

1974/1975

1st Sem. 407 2nd Sem. 520

High Week	Examined	% Exam.	Promoted	% Fail.
				C
2,385	1,238	(53.8)	931	(28.4)
2,465	1,436	(58.3)	1,187	(17.3)
4,521	3,384	(74.9)	2,878	(15.0)
4,789	3,366	(70.3)	3,234	(3.9)
3,238	2,212	(68.3)	1,637	(7.5)
2,711	2,154	(79.5)	2,069	(3.9)
20,109	13,835	(68.8)	11,937	(10.4)

Although the second and third grades were offered, it was only for one semester each, and the figures are much lower. The number of sectors increased rapidly from 102 in the first semester to 207 in the second semester as the radiophonic schools were extended throughout the "Cibao" region.

Second Year: 1973/1974

In the second year of operation the permanent design of course offerings was established: first, third, fifth, and seventh grades in the first semester and second, fourth, sixth, and eighth in the second semester. With the addition of the seventh and eighth grades and the expansion to 289 sectors in the second semester, the enrollment rose rapidly to 22,375 in the high week and promotions to 15,694. There is a much greater response to the upper grades, that is, fifth and above, and the most popular grades are those in which official primary and intermediate level certificates are obtained, namely, sixth and eighth grades. The average number of students enrolled per sector is approximately 77 with an average of 54 students promoted in each sector.

However, the scholastic year of 1972/1973 was, in many respects, still experimental and the efforts at greater flexibility led to abuses. Some students attempted a double enrollment in both the formal public educational system and in the radio school. For example, while enrolled in the seventh grade in the public day school, they enrolled in the eighth grade in the radiophonic, hoping to obtain the eighth grade certificate at the same time. The enrollment was held open until almost the end of the semester, allowing too little time for learning the material.

The long period allowed for enrollment explains, in part, the high retention rate from the high week to the time of final examination, and it is likely that the total number of students actually enrolled in 1972/1973 is higher than 22,375.

Third Year: 1974/1975

In the third scholastic year the total initial enrollment dropped slightly from 22,375 to 20,171, in spite of the fact that the first regional subcenter was opened in the Dajabón region near the Haitian frontier and the number of sectors was increased to 384. This drop in total enrollment in the third year was primarily influenced by the decision of the Secretariat of Education that the intermediate level, seventh and eighth grades, must be a full year course rather than six months, as it had originally been. To accommodate the full year course of seventh and eighth grades within a broadcasting framework of four half hour periods, the first and second grades were dropped since these grades were in least demand.

Given the abuses of the flexibility in the previous year, the field teachers were instructed to eliminate all students who were under the fourteen year age level and those students attempting a double enrollment. Also, field teachers were asked to be more demanding in the attendance at the weekly interchange and in other requirements. The enrollment period was closed somewhat earlier than in the previous year. Thus, the establishing of higher academic norms within a general framework of flexibility is reflected in the somewhat lower enrollment, but especially in the lower percentage of retention between the high week and the examination.(58 percent compared to 70 percent in the previous year).

In general the retention of students up to the examination is consistently highest in the upper grades and especially in the sixth and eighth grades where students are motivated by the immediate prospect of obtaining the official primary or intermediate level degree. The low retention rate in 1973/1974 is an anomaly due tothe extension of the course to a full year causing discouragement among some students. The retention is lowest in the third and fourth grades, but especially in the third grade. In part, this seems to be due to the remoteness of obtaining the primary certificate and the lower motivation in the face of difficulties, but it may also be due to the fact that first and second grades were dropped and many attempted to enroll in third grade without the necessary preparation. Further, an important factor is that third grade students are more likely to be "dropouts" from the public primary schools and bring with them many of the same problems of academic capacity and socio-economic background which they have had before. The students entering the fifth and higher grades are those who have successfully completed their schooling in the existing primary schools and are simply continuing on in the radiophonic

The overall percentage failing the examination is virtually the same as in the previous scholastic year. There is a consistent tendency for the lowest percentage of failures to occur in the sixth and eighth grades where certificates are offered. The regulations of the Secretariat of Education require students taking the general final examinations and failing in two or more subjects to take the examinations in these subjects again. Thus, students who may have failed the examination the first time have a further opportunity to successfully complete the examinations and receive the certificate.

Because of the slightly lower enrollment and especially because of the greater academic demands, the number of promotions was lower than in 1972/1973. It is significant that although the number of sectors is increasing in 1973/1974, the approximate average number of students enrolled is much lower, 53, and those promoted correspondingly lower, 30.

Fourth Year: 1974/1975

Although the radiophonic schools were extended with a second regional subcenter in the capital and the number of sectors increased to 520 in the second semester, enrollment remains almost the same. It is likely that many of the potential students have taken advantage of the opportunity and the enrollment in the initial sectors is declining. The period of enrollment remained virtually the same in 1974/75, but the average retention of students rose to 63.8 percent from 58.0 percent. The approximate average of students enrolled per sector again decreased, from 53 in 1973/1974 to 38 in 1974/1975, but the number of promotions remained relatively stable, 30 per sector in 1973/1974 and 26 in 1974/1975. In general, this is attributed to an increasingly better selection of students at the beginning of the semester so that only those who have the serious intent of finishing the course were encouraged to enroll, better performance of the field teachers, and a stabilization of the central office administrative procedures.

The lowest level of retention and by far the highest percentage failing the examination continues to be in the third and to some extent in the fourth grade. It is significant that even though seventh and eighth grades have been extended to a full year in the scholastic years of 1973/1974 and 1974/1975, providing, one would suppose, a better academic training, the percentage passing the examination remains virtually the same.

Conclusions

The analysis of these statistics shows that it is possible to extend a system such as that of Santa Maria on a national basis in a period of three or four years. In spite of a change from a program of alfabetization offered gratis to one in which students were asked to pay a moderate fee to defray some of the expenses of each course, the enrollment increased significantly with the opportunity to enter a grade program leading to primary and intermediate level certificates.

The grades which are attracting the highest enrollment are five through eight, which is the complement of the first four grades typically found in the rural community.

One of the notable achievements in the program is the high retention rate of students who enroll, given the great flexibility of the system. Even if one allows for the fact that enrollment is closed only at the midsemester point, that retention is approximately 70 to 75 percent in some of the advanced grades is remarkable compared with most radiophonic adult education programs. The major factor in this is the introduction of the graded system and the offering of the officially recognized degree. Retention in the lower grades is significantly lower. Many students in the lower grades have weaker motivation and greater academic difficulties stemming, according to present interpretation, from the fact that they are generally dropouts from the lower grades of the public primary schools and are more likely to be disadvantaged in their socio-economic background. The students in the advanced grades are those who have successfully completed the existing education available in the community and have only needed an opportunity to continue their education. Many students entering the lower grades may need remedial help to overcome academic deficiencies and to reinforce motivation. Although the field teachers have been advised to spend more time on the lower grades, the sixth and eighth grade students are facing general examinations and often press for more help and greater amounts of time.

The first three years were a period of considerable adjustment to achieve the proper balance between the flexibility which would provide the maximum opportunity for education and, at the same time, maintain educational standards which insure academic achievement. Although a long enrollment period was an advantage, this had to be limited to the first half of the course with sufficient time before the midterm examination to permit a review of the matter covered up to that time. It was also a period of adjustment to the legal requirements of the Secretariat of Education and coordination with the conventional systems of public and private education.

In general there has been a gradual improvement in the instructional materials and a stabilization of the administrative procedures, the educational methodology, and the quality of the field teachers. Although the average number of students per sector is gradually declining, the number retained until the examinations is holding steady or declining less rapidly. In general it is felt that there is greater care in enrolling students and in supervising the learning process of those who are enrolled.

These statistics suggest that there is a certain limit to the enrollment potential for a formal, graded program such as that of Radio Santa Maria or, perhaps, to any adult education program. Simply because 90 percent of the rural population has less than four years of formal schooling is no guarantee that all will want to take advantage of this adult educational opportunity. Only a small percentage of adults is interested and capable of taking advantage of a graded program. After an initial high enrollment there is a tendency toward decline in enrollment. Since the first year the enrollment has stayed rather steady in the Santa Maria system, and, although the statistics for the scholastic year of 1975/1976 are not complete at this writing, the initial enrollment (high week) is about 21,024. This is largely explained by an increase in enrollment in the eighth grade; there is a slight decline in the enrollment in the third and fifth grades.[2] Much of the growth or maintenance of a steady state has come from the expansion of the system to new areas. Once the system has been fully extended to the whole country, it is likely that the enrollment will stabilize and, then, eventually decline as public primary schools become more widespread. It seems almost certain that in a period of five years--with the current educational reform and greater investment in education in the Dominican Republic--the radiophonic program will be of greatest benefit at the intermediate and the secondary level.

Perhaps the most significant service of an institution which has the facilities for organizing, producing, and supervising radiophonic courses is the extension of a variety of adult education opportunities: in accounting, agriculture, nursing, etc. according to the employment needs and popular demands of the country.

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[2] The enrollment in 1975/1976 may have been influenced by the very difficult financial situation in some rural areas due to the worst drought in several decades.

CHAPTER VI

COMPARATIVE LEVELS OF ACADEMIC ACHIEVEMENT IN THE RADIOPHONIC AND THE CONVENTIONAL CLASSROOM METHODS

The basic objective in lifelong education is not simply to provide an educational opportunity for marginal groups which traditional educational systems have neglected, but to introduce new educational methodologies and techniques which make it possible for people of all ages to learn more rapidly and with greater comprehension than in existing methods. A central question in this study is whether, with an educational methodology such as that of Santa Maria which combines six different types of learning experiences, adult students have higher levels of academic achievement than adult students educated in the conventional classroom method.

The initial impression of some observers, including a limited study comparing the scores of a sample of students in the radiophonic schools of Santa Maria and students in the official adult education program on a test covering primary school matter,[1] is that the methods of Santa Maria influence levels of academic achievement superior to those obtained by classroom methods used in adult programs in the Dominican Republic. One measure, then, of the validity of the radiophonic method is the comparison of the academic achievement of adult students finishing the primary level (sixth grade) and intermediate level (eighth grade) in the radiophonic schools of Santa Maria with a matched group of sixth and eighth grade students in the adult education program of the Secretariat of Education which uses the classical, direct-teaching methods. The assumption in this research methodology is that these two groups of students have the same age levels and cultural background and differ only in the educational methods to which they have been exposed.

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[1] This study, carried out in 1973, consisted of the application of a specially prepared test covering material in the curriculum established by the Secretariat of Education to randomly selected samples of fifteen students in three grades, second, fourth, and sixth of the radiophonic schools of Santa Maria and to matched samples of students in the official adult education program in the city of La Vega, the Dominican Republic. At the second grade level, there was no significant difference

These general observations led to the formulation of the following hypothesis:

I There exists a significant difference in the level of academic achievement of students in grades six and eight of the Santa Maria radiophonic school system and the students of grade six and eight of the classical program of adult education sponsored by the Secretariat of Education in favor of the former.

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in the mean test scores of students in the radiophonic schools and those in the schools with traditional methods. However, at the fourth grade level, the radiophonic students had mean scores of 66 compared to mean scores of 40 of students in the official schools (one tailed "t" test of 4.38 with 28 d.f., significant at the .001 level). And, at the sixth grade level, radiophonic students had mean scores of 69 compared to mean scores of 47 for the other group ("t" of 4.65 with 28 d.f., significant at the .001 level). *Cf*. Hilda V. Decena-Dilone, *Estudio comparativo del rendimiento de los alumnos de las Escuelas Radiofónicas de Radio Santa Maria y de la educación de adultos oficial*. Tesis presentada a la facultad de educación de la Universidad Católica Madre y Maestra, Santiago, República Dominicana, 1973.

A corollary of this is that the influence of the method of Santa Maria tends to be cumulative, that is, that students who have enrolled in the radiophonic schools in the early grades gain a stronger foundation in the various subjects and can be expected to have progressively higher levels of academic achievement than students who have recently entered the radiophonic system. On the other hand, there is evidence that students just entering the radiophonic system find it quite different from the classroom context and that a period of adjustment is necessary. Therefore, it would be expected that the academic achievement of radiophonic students in the first year after enrollment would be low, probably lower than that of students in the comparative classroom context, but that it gradually increases with successive years of enrollment in the radiophonic schools of Santa Maria.[2]

The intermediate level in the educational system of the Dominican Republic is designed as a preparatory step for entering the secondary schools, and a significant number of the eighth grade graduates of the radiophonic schools of Santa Maria are enrolling in the public and private day and night secondary schools as well as in the secondary education by correspondence through APEC. If the level of preparation at the intermediate level in the radiophonic schools is superior, this out to be evident in the performance of radiophonic graduates in the secondary schools. Therefore, the second hypothesis is that:

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[2] A more extensive presentation and analysis of the data regarding levels of achievement of different periods of enrollment in the radiophonic schools of Santa Maria is given in Appendix IV. A summary is included in the discussion of Hypothesis I.

> II Eighth grade graduates of the radiophonic schools of Santa Maria have levels of academic achievement in the secondary schools which rank them equal to or above the average of their class in the particular secondary school.

HYPOTHESIS I: THE COMPARATIVE ACADEMIC ACHIEVEMENT OF SIXTH AND EIGHTH GRADE STUDENTS IN SCHOOLS WITH RADIOPHONIC AND TRADITIONAL METHODS

The Methodology For Testing This Hypothesis

1. The Instrument Used

The most objective and easiest to interpret indicators in comparing academic achievement in this case are the scores on the final certificate examinations at the end of the primary (sixth grade) and intermediate level (eighth grade). The certificate examinations are prepared by the members of the school systems and are the accepted indicators of achievement by the educators themselves, while a special examination or test would not be strictly comparable in the context of the Dominican Republic. This procedure demanded that the same test be applied to both randomly selected samples of sixth and eighth grade students.

However, the final certificate examinations which the radiophonic schools of Santa Maria uses for the sixth and eighth grade differ somewhat from the final examinations used in the adult education schools of the Secretariat of Education. Radio Santa Maria follows essentially the same curriculum as the official adult education program and its certificate examinations are approved by the Secretariat of Education, but Santa Maria streses different themes in areas such as social studies and attempts to adapt the material to the life context of the largely rural student body. Also, the style and format of examinations used in the radiophonic schools are different in some respects. The most convenient procedure in the circumstances was to use the examination prepared by the District Offices of the National Office of Adult Education for its sixth and eighth grade courses as the test instrument for both groups.[3]

It was recognized that even though the radiophonic schools of Santa Maria cover basically the same subject matter as that taught in the official adult education program, the radiophonic students would be somewhat at a disadvantage in taking an examination prepared for students in a different system. In order to remove the most obvious lack of parity in the test instrument, questions in the official examination touching subject material not covered in the classes of Santa Maria were eliminated from the computation of grades of students of both the radiophonic and the direct-teaching method students. Although some of the field teachers reported that students were disconcerted by the strangeness of the official examination and there is evidence that the grades of the radiophonic students taking the test examination were lower than the universe of radiophonic students taking the normal examination of Santa Maria, it is judged that this decision in the use of instruments did not substantially affect the outcomes of the study, as will be noted in the discussion of the results below.

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[3] A specially constructed examination neutral to both types of schools would not have been acceptable as the certificate examination for the sample selected and would have been an unjust burden to the students in the two samples who were already giving a full week in taking the certificate examination. The possibility of giving the Santa Maria certificate examination to a subsample of the sample of radiophonic students taking the Secretariat examination to compare difference in grades and measure in some degree the influence of the Secretariat examination was also discarded because of the burden to the students.

A further factor in the instrument used was the fact that the area selected for the sampling of students of the two systems included two separate administrative districts of the National Office of Adult Education, each of which prepared quite different certificate examinations. In effect, two different comparative instruments were used so that the results are presented below as two different sets of data, District I and District II.[4]

In addition to the examination, students in the radiophonic and official systems were asked to respond to a questionnaire regarding social status, educational background, experience and attitudes in the radiophonic and official schools, and value orientations.

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[4] Once the week of examinations began, eighth grade students in the official schools in District I illegally obtained copies of the examination. Thus, in the middle of the examination week the District Office of Adult Education changed the examination for the remaining three subject matters. Since the original examination prepared by the office of adult education had already been distributed to the sectors of the radiophonic schools in

2. Selecting the Samples

The two universes from which the samples of sectors of the radiophonic schools and the schools of Office of Adult Education were to be selected were determined by the location of the system of radio schools in the Dominican Republic. Since the radio schools had nearly five years of functioning in the northcentral, Cibao region at the time of the study and only recently had been extended to the areas of the Haitian frontier and the national capital, the universes were restricted to the three principal provinces of the Cibao where the radiophonic schools had their greatest concentration.

A major factor taken into consideration in the sampling was rural or urban location of the radiophonic and official schools. Comparative studies of radiophonic schools and other methods of adult education have found that adult students living in an urban or more urbanized context tend to have a more literate background which reinforces the school experience.[5] A secondary hypothesis in this study is that students of an urban background, regardless of the educational method, tend to have higher levels of academic achievement than most students in rural areas. This is especially relevant in the present

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the sample, it was impossible to get these emergency examinations to the radiophonic students. Thus, in three of the six subjects in the eighth grade in District I, it was not possible to include the students of the official schools in the comparison of examination grades.

[5] Beverly Jean Chain, An Analytical Description of Three Adult Literacy Programs in Bolivia, Honduras, and Guatemala. Unpublished Ph.D. Dissertation. Teachers College, Columbia University, 1974, p. 252.

case because the official adult education sixth and eighth grade levels tend to be located almost entirely in urban areas while the sectors of the radiophonic schools tend to be largely (but not exclusively) in rural communities. This would suggest that the students in the official adult education system, coming largely from an urban context, would have a cultural advantage over the students of the radio schools from a largely peasant background. To insure that a comparable group of rural and urban students were included in the sample, a proportionally ic-stratified sample of rural and urban radiophonic sectors was drawn. A rural-urban stratification in the case of the sample of official schools, unfortunately, was not possible because of the lack of rural schools at this grade level.

3. Applying the Examination and Coding the Data

Once the sample had been selected, arrangements were made with the directors of the radiophonic schools for applying the examinations and the questionnaire during the week of the certificate examinations. Much more careful instructions were given the field teachers who were to apply the official examination which might present difficulties for some students.[6]

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[6] Ideally, an observer from the research team ~~would have~~ would have been present during the giving of the examination in both the official and the radiophonic schools, to insure that correct procedures were followed. However, this would have required nearly forty-five observers for all of the sectors and schools involved in the sample over a period of a week, and this was beyond the allowed budget. However, there is no evidence of anomalies in applying the examinations.

University students from the School of Social Work of the Universidad Madre y Maestra visited each sector and school in the sample during the week of the examination to apply the special questionnaire.

Once the examinations had been finished in both the radiophonic and official schools, they were brought to the Center for Social Research at the Universidad Madre y Maestra for correction by a specially trained team and grade scores were coded for computation.[7]

In the coding of the examination scores for a comparative analysis, it was important that the comparative statistic be not simply an arithmetic mean summarizing the whole distribution, but that it be possible to compare the percentage of students in each type of school who had very low (below the failing mark) or relatively high (80 or above) grade scores. Also, in the present context, raw grade scores tend to be bunched in the lower categories of from 50 to 70, and a few relatively high grade scores would tend to shift the arithmetic mean toward the highest end of the continuum, giving a false impression of the true central tendency of the sample distribution. Thus, for purposes of a summary presentation, the raw grade scores were grouped in six ordinal categories: 1) less than 50; 2) 50 to 59; 3) 60 to 69; 4) 70 to 79; 5) 80 to 89; 6) 90 and above. To make comparative analysis easier, these six categories were further reduced in the presentation in the tables below to three categories: the percentage of students receiving failing grade scores in the examination (below 60); those receiving a grade score from 60 to 79, demonstrating an acceptable comprehension of the matter; and those with scores of 80 or more demonstrating a relatively complete mastery of the subject matter.

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[7] The final grade scores given by the research team were accepted as the final certificate grade scores by the radiophonic schools, but the official schools graded the examinations for their own purposes before delivering them for the special grading by the research team.

In some few cases, those responsible for grading the examinations in the official adult education schools, in the administrative shuffle, lost the examination papers of some students in the sample after grading them, and it was not possible to recover them for the special correction. In cases where only part of the class was submitted, it was later found that this often did not represent the normal distribution of the class, and the whole section had to be excluded from the calculation. This does not seem to have been an attempt on the part of some of the teachers in the official schools to turn in only the better examination papers since the examinations delivered were usually representative of the lowest categories of the class distribution.

This failure to deliver some of the examination papers explains the non-responses in some subjects of the official schools in the tables given below.

This method of coding the data in a series of ordinally ranked categories permits the use of the median as the summary descriptive statistic of the sample, but not the arithmetic mean. In a sample of 111 sixth grade students, the grade of the student who ranked fifty-sixth would represent the median score for that sample. If nearly half of the sample have grade scores below 60, for example, the median grade score would be very low, little above sixty, even though some students in the sample would have very high grades.

Analysis of the Grade Scores of Radiophonic and Official Students in the Certificate Examinations

The comparative level of achievement under conditions of two different methods is measured in two ways: 1) the distribution of examination scores on each of the six subject matters of sixth and eighth grade in the categories of "failing" (60 or below), "acceptable command of subject matter" (60 to 79), and "relatively complete command of subject matter" (80 or above); and 2) the median grade scores of the two samples of students on each subject matter.[8]

The analysis is very much influenced by the use of two different official examinations in the two Districts of the Office of Adult Education. In District I, the radiophonic students tended to have significantly higher levels of achievement, as measured by median grade scores, in all subject matters at both the sixth and eighth grade levels. In District II, the results are mixed, with radiophonic students at the sixth grade level having similar or higher median scores than students in in schools with classroom methods, but at the eighth grade level generally lower median scores. The initial impression may be that the apparently inconsistent results offer little help in evaluating the effectiveness of the radiophonic methods, but a closer analysis of comparative achievement levels by grade level and subject matter is actually quite revealing.

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[8] The major disadvantage in using the median as a summary measure in the comparison of two samples is that it is much more difficult to derive an accurate statistic stating whether the difference of two medians is statistically significant at given levels of confidence in a manner analogous to the use of Student's "t" for establishing the probability of a real difference in two means. Because of the possibility of inaccuracies, no attempt to establish significance levels was made.

Another disadvantage, in the present case, is that grade scores of less than 50 are grouped in one category of "less than 50." Thus, a score as low as 15 or as high as 45 are in the same category, and it is difficult to estimate the real arithmetic mean of a distribution.

For a discussion of the formula used for calculating the median with grouped data, Cf. Hubert M. Blalock, Social Statistics. (New York: McGraw-Hill Book Company, 1960), pp. 55-57.

At the sixth grade level in District I, the radiophonic students were strongest in social studies with a median grade of 79.5 and with 49.1 percent having a grade of 80 or higher; in Spanish language, with a median of 74.6 and 23.4 percent having grades of 80 or higher; and in natural sciences, with a median grade of 69.0. Sixth grade radiophonic students in District I had the lowest median grades in Dominican economy, 60.6 (48.2 failed the examination) and were especially weak in mathematics with a median grade of 53.3 and 64.0 failing the official examination.[9] However, the students in the official schools were notably weaker in all subject matters, with very low percentages showing a mastery of any subject matter and

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[9] The radiophonic students faced some disadvantage in taking the official examination, and the removal of questions touching subject matter not covered in the radiophonic classes in the special grading to establish parity between the two samples of students may have shifted the whole grading scale downward. That is, with fewer questions, a single question has a greater influence on the total grade. Therefore, the important factor in diagnosing the relative strength or weakness of radiophonic students in a particular subject is not precisely the absolute percentage of those who failed in the examination (less than 60)--although this is indicative--but the *ranking* of the subjects according to percentages or medians. For example, mathematics consistently ranks as the lowest subject for radiophonic students.

Table 6.1 : Comparison of Median Examination Scores of Sixth Grade Students in Schools with Radiophonic and Conventional Classroom Methods: District I

	Radiophonic Students				
Subject	No.	% Less Than 60	% 60-79	% Higher Than 80	Median Score
Spanish Language	111	5.4	71.2	23.4	74.6
Spanish Grammar	108	32.4	51.9	15.7	65.8
Mathematics	111	64.0	34.2	1.8	53.3
Natural Sciences	111	16.4	71.8	11.8	69.0
Dominican Economy	110	48.2	47.3	4.5	60.6
Social Studies	110	20.0	30.9	49.1	79.5

Table 6.1 : Comparison of Median Examination Scores of Sixth Grade Students in Schools with Radiophonic and Conventional Classroom Methods: District I

	Conventional Classroom Students				
Subject	No.	% Less Than 60	60-79	% Higher Than 80	Median Score
Spanish Language	107	13.0	71.1	15.9	71.9
Spanish Grammar	107	51.4	39.3	9.3	59.3
Mathematics	107	75.7	22.4	1.9	50.8
Natural Sciences	105	32.4	60.0	7.6	65.0
Dominican Economy	105	62.8	32.4	4.8	54.6
Social Studies	105	21.9	57.1	1.0	68.9

Table 6.1 : Comparison of Median Examination Scores of Eighth Grade Students in Schools with Radiophonic and Conventional Classroom Methods: District I

Radiophonic Students

Subject	No.	% Less Than 60	% 60-79	% Higher Than 80	Median Score
Spanish Language	48	2.1	56.2	41.7	78.4
Spanish Grammar	49	32.7	63.3	4.0	65.3
Mathematics	48	58.3	22.9	18.8	53.3
Natural Sciences	49	44.9	36.7	18.3	63.1
English	48	14.6	52.1	33.3	70.0
Social Studies	49	40.8	32.6	26.5	64.5

Conventional Classroom Students

Subject	No.	% Less Than 60	% 60-79	% Higher Than 80	Median Score
Spanish Language	57	1.7	72.0	26.3	76.2
Spanish Grammar	57	40.3	59.7		63.1
Mathematics	57	61.4	26.3	12.3	51.9

Table 6.1 : Comparison of Median Examination Scores of Sixth Grade Students in Schools with Radiophonic and Conventional Classroom Methods: District II

		Radiophonic Students			
Subject	No.	% Less Than 60	% 60-79	% Higher Than 80	Median Score
Spanish Language	198	11.1	64.2	24.7	73.0
Spanish Grammar	198	40.9	39.4	19.7	63.9
Mathematics	199	82.9	13.6	3.5	less than 50.0
Natural Sciences	199	36.2	50.8	13.0	64.9
Dominican Economy	200	74.5	24.5	1.0	less than 50.0
Social Studies	201	62.1	33.4	4.5	54.4

Table 6.1 : Comparison of Median Examination Scores of Sixth Grade Students in Schools with Radiophonic and Conventional Classroom Methods: District II

	Conventional Classroom Students				
Subject	No.	% Less Than 60	60-79	Higher Than 80	Median Score
Spanish Language	87	17.2	70.1	12.6	70.7
Spanish Grammar	83	44.6	42.2	13.2	63.5
Mathematics	33	72.7	24.3	3.0	50.6
Natural Sciences	52	59.6	38.5	1.9	57.4
Dominican Economy	52	71.2	28.8		54.2
Social Studies	60	66.7	31.7	1.7	55.8

Table 6.1 : Comparison of Median Examination Scores of Eighth Grade Students in Schools with Radiophonic and Conventional Classroom Methods: District II

		Radiophonic Students			
Subject	No.	% Less Than 60	% 60-79	% Higher Than 80	Median Score
Spanish Language	103	16.5	60.2	23.3	70.5
Spanish Grammar	103	68.4	25.2	6.8	less than 50.0
Mathematics	102	71.6	28.4		less than 50.0
Natural Sciences	103	40.8	44.7	14.6	65.3
English	103	62.1	33.1	4.9	52.7
Social Studies	103	37.9	43.7	18.5	65.00

Table 6.1 : Comparison of Median Examination Scores of Eighth Grade Students in Schools with Radiophonic and Conventional Classroom Methods: District II

Conventional Classroom Students				
No.	% Less Than 60	% 60-79	% Higher Than 80	Median Score
29	3.4	75.9	20.7	73.9
40	65.0	27.5	7.5	55.0
68	38.2	54.4	7.4	63.0
68	47.1	48.5	4.4	60.9
29	48.3	37.9	13.8	60.5
69	8.7	63.8	27.5	74.0

large percentages failing in mathematics (75.7 percent), Dominican economy (62.8 percent), and Spanish grammar (51.4 percent).

The sixth grade radiophonic students in District I had higher median grades than students in the direct-teaching schools in all subjects, but the differences in median scores were especially notable in social studies, 79.5 to 68.9; Spanish grammar, 65.8 to 59.3; and in Dominican economy, 60.6 to 54.6.

Moving to the sixth grade group in District II, there is a somewhat different picture. Here, the radiophonic students had the highest median grades in Spanish language, 73.0; natural sciences, 64.9; and in Spanish grammar, 63.9. In contrast to the high median of 79.5 in social studies in District I, sixth grade radiophonic students in District II had a median of 54.4. However, in District II radiophonic students were again lowest in Dominican economy and mathematics: 82.9 percent failing mathematics and 74.5 percent failing Dominican economy and with median grades below 50 in both cases. In general, the median grades of sixth grade radiophonic schools are consistently lower than those of District I.

The median scores of sixth grade radiophonic students in District II were superior to the control group of official students in only three subjects: natural sciences, 64.9 to 57.4; Spanish language, 73.0 to 70.7; and Spanish grammar, 63.9 to 63.5. Radiophonic students have lower median grades in social studies, 54.4 to 55.8 (a subject the radiophonic students excelled in above in District I); in mathematics, less than 50 compared to 50.6; and especially in Dominican economy, less than 50 compared to 54.2. However, these differences are relatively small, and if one concedes a margin of disadvantage in the examinations of one to five percentage points to the radiophonic students, these results indicate that at the sixth grade level radiophonic students continue to have levels of achievement as high or higher than those experiencing the classroom methods.

At the eighth grade level in District I, radiophonic students had the highest median grades in Spanish language, 78.4; English, 70.0; and Spanish grammar, 65.3; and from 25 to 40 percent showed a mastery of the matter in these subjects with only small percentages receiving failing grades. In contrast to the sixth grade students, the eighth grade radiophonic students were somewhat weak in natural sciences with a median grade of 63.1. Again, by far the weakest subject is mathematics with a median grade of 53.3 with only 18.8 percent demonstrating a mastery of the material and 58.3 percent receiving a failing grade.

The comparison of grade scores at the eighth grade level in District I is limited by the lack of comparable data from the official schools in three subject matters; natural sciences, English, and social studies. However, in the subjects for which data is available, radiophonic students have relatively ly higher median grades: Spanish language, 78.4 to 76.2; Spanish grammar, 65.3 to 63.1; and in mathematics, in spite of the poor showing, 53.3 to 51.9. The relatively high median grades of radiophonic students in the other three subjects, natural sciences, English, and social studies suggests that had comparative data been available from the official schools, the radiophonic students would have shown higher median scores. However, it should be noted that at the eighth grade level the superiority of the radiophonic students is not as great as that of sixth grade students in District I.

In District II at the eighth grade level, radiophonic students tended to have the lowest levels of achievement and were generally lower than students in schools with classroom methods. The eighth grade radiophonic students were again strongest in Spanish language with a median grade of 70.5; in natural sciences, 65.5; and in social studies, 65.0. The median grades were very low in English 52.6 and less than 50 in Spanish grammar and mathematics. In these three subjects between 60 and 70 percent of the eighth grade radiophonic students failed the official examination.

In District II, the eighth grade radiophonic students have a higher median grade only in natural sciences, 65.3 to 60.9. The median grades of radiophonic students were very much lower in mathematics, less than 50 compared to 63.0; social studies, 65 to 74.0; English, 52.6 to 60.5; and Spanish grammar, less than 50 compared to 55.0.

The disadvantage of the radiophonic students in the examination must be taken into consideration in the interpretation of these data, but it is difficult to measure this quantitatively in terms of median grades.[10] Conceding an average of three to five percentage points appears to be a safe margin. However, when the radiophonic students have median grade scores five to ten points below those of the control group, as in the case of the eighth grade level in District II, this indicates an academic deficiency.

To summarize, with some reservations, the data do support the hypothesis that students in the radiophonic schools have levels of achievement superior to those of students in the schools using traditional methods of instruction, with the margin of superiority varying with the subject matter. At the sixth grade level the superiority is greater and more consistent than at the eighth grade level. And at the eighth grade level in District II, radiophonic students demonstrated a fairly clear academic deficiency in comparison with students in the official schools.

When the median scores of radiophonic students are ranked, comparing among the subjects, the strongest subjects are consistently in the language area (Spanish language and Spanish grammar) and in the natural sciences. The ranking of social studies is inconsistent, but tends to rank somewhat higher. Mathematics and Dominican economy are consistently the subjects radiophonic students are weakest in.

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[10] Among the group of eighth grade radiophonic students selected in the sample, 71 percent failed at least two subjects and were required to repeat the examination while in the universe (the Cibao region) taking the ordinary Santa Maria certificate examination only 25 percent were required to repeat the examination. At the sixth grade level, 76 percent in the study sample were required to repeat examinatinns in some subjects while only 33 percent of the sixth grade taking the ordinary examination were required to repeat. As the statistics in the number of sixth and eighth grade students passing the examinations suggest (Chapter V), nearly 80 percent of the students of the sample repeating the examinations passed. This is one indicator of the possible influence of the official examination in the sample of radiophonic students.

In comparison with students in the official schools, the only subject in which radiophonic students are consistently superior--at all grade levels and in both Districts--is natural sciences. Radiophonic students are consistently weakest in mathematics in comparison with official students. They also tend to be somewhat stronger than official students in Spanish language and in Spanish grammar, and, comparatively, somewhat weaker in social studies, a surprising fact considering the emphasis of Radio Santa Maria in this area.

Although the data does, in general support Hypothesis I that the methods of Santa Maria achieve results superior to conventional teaching methods, several questions remain to be answered: 1) Why both sixth and eighth grade radiophonic students are superior to students in the official schools in District I but not in District II? On the grounds of the evidence the results in District II appear to deny the hypothesis because if a hypothesis is not generally supported it falls. To sustain the hypothesis an explanation of the discrepancy between District I and II must be found which is consistent with the concept of lifelong education and the present analysis of the radiophonic method of Santa Maria. 2) Do rural and urban residence influence results on the examinations; 3) Why do eighth grade radiophonic students tend to have somewhat lower levels of academic achievement on these examinations than the sixth grade; and 4) Does length of study in the radiophonic schools of Santa Maria appear to influence the results?

Explaining the Discrepancy in the Levels of Achievement of Radiophonic Students in District I and II

Three possible explanations of why radiophonic students in District II had comparatively lower levels of academic achievement were considered: 1) the examinations of District II were more difficult; 2) the students of the official system were better prepared in District II than in District I; and 3) the radio school students taking the examination in District I were better prepared than those in District II.

A review of the examinations of District I and II by competent judges failed to arrive at any agreement that the examinations in District II were significantly more difficult, and this was ruled out as an important factor. Nor does there seem to be any reason to think that students in the official schools were better prepared in District II than in District I. If an overall median grade is computed for the six subjects, the students in District I at the sixth grade level have a higher median of 61.8 than those at the sixth grade level in District II, 53.7. Although data is incomplete for the eighth grade level, those of District I have an overall median grade of 63.7 in three subjects while those of District II have a general median of 64.5, a very insignificant difference.

However, a closer examination of the data gave clear indications that the radiophonic students in a significant number of the sectors in the sample in District II had received a weaker training and that this was directly related to the ineffectiveness of the field teachers in those sectors. In one sector, for example, selected in the sampling, nearly all of the students failed not only in the taking of the official examination but in the repeat examination prepared by Santa Maria. It was discovered that the field teacher had been negligent in a series of duties, and substitution was necessary. This and several other similar cases suggested that there is a significant relationship between the effectiveness of the field teacher and the level of academic achievement of the radiophonic students.

To test this thesis with the data gathered in this study, each of the field teachers in the thirty-three sectors in the sample was rated on a twelve point scale according to three characteristics: academic capacity, maturity and responsibility in the duties of the field teacher, and demonstrated leadership capacity in the community. The ratings were based on interviews with the field supervisor of Radio Santa Maria, personal visits of the author with field teachers, and other available information. Since differentiation along a twelve-point scale involves a certain degree of subjective error, the ratings of the field teachers were grouped into three broad categories: ratings of 1-5, inadequacies in the three basic dimensions;

6-7, adequate; 8-11, good to outstanding. The first two categories contained equal numbers of field teachers and the "good to outstanding" category fewer.

The median scores for the students in each of the thirty-three sectors were then computed, throwing together both sixth and eighth grades since field teacher influence was considered to be a group factor. These median scores on five subjects common to both sixth and eighth grade were then grouped according to whether the field teacher of the median score of the sector was "inadequate," "adequate," or "good to outstanding." and the median scores for each category of field teacher were averaged. The analysis of the median grade scores associated with each category of field teacher shows that, , in almost every subject matter, the higher the rating of the field teacher, the higher the median grades on all subject matters (Cf. Table 6.2).

If one takes into consideration the many other factors such as the individual effort, previous training, personal intelligence and, above all, the fact that the lesson sheets and the radio broadcasts are intended to be the principal learning aids to be used independently of the field teacher, the consistent relationship between field teacher effectiveness and median score on the examination is remarkable. Moreover, the effectiveness of the field teacher appears to be most important in the subject of mathematics which is the weakest area of the radiophonic students and the least significant in the area of natural sciences, where radiophonic students are strongest. Students

Table 6.2 : Median Scores of Radiophonic Students on Certificate Examination According to Capacity of Field Teacher

Subject	Inadequate Field Teacher Median Score	Adequate Field Teacher Median Score	Good to Superior Field Teacher Median Score
Spanish Language	73.0	75.0	76.3
Spanish Grammar	58.4	65.4	66.5
Mathematics	Less than 50.0	53.4	56.2
Natural Sciences	64.6	67.4	66.4
Social Studies	58.8	60.1	68.7

in sectors with good to outstanding field teachers--who are usually field teachers with the greatest social awareness and community leadership--are noticeably higher in social studies than adequate field teachers.

In the ranking of the field teachers, it was evident that the sectors in District I, where the radiophonic students had considerably higher median scores than the official students, tended to have higher ranking field teachers--especially in a few sectors with a large number of students in the sample. It appeared that a major factor in the higher academic achievement of District I was the greater effectiveness of the field teachers. As a test of this proposition a type of coefficient of effectiveness of the field teachers in Districts I and II was calculated.[11] As expected the coefficient of field teacher effectiveness in District I was 8.31 while in District II it was 5.16. Clearly, a major factor in the superior performance of radiophonic students in District II is due to the field teacher. A major conclusion of this study is that the radiophonic system of Santa Maria influences higher academic achievement in its students in so far as there are at least adequate field teachers

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[11] This coefficient was calculated simply by multiplying the ranking of the field teacher on the twelve-point scale by the number of students in the sector and then summing all of these products in each of the two districts. Finally, this sum was divided by the total number of students in the sample in each district. This assumes that the effectiveness of the field teacher is a structural characteristic influencing the whole student body in the sector.

These data indicate that the field teacher is playing a more important role in the series of learning experiences than the method of Radio Santa Maria has projected. The interaction of the use of lesson sheets, daily broadcasts and the field teacher need to be analysed in greater detail to determine how the field teacher multiplies the effectiveness of the other learning experiences. It is important to note that not only this analysis of the results of the examinations but many other pieces of evidence indicate that at present the field teacher is the weak link in the radiophonic system of Santa Maria.[12] The question of how the effectiveness of the field teacher can be improved--through more careful selection, at least an initial group training course, more frequent zone meetings, better control from the central office, etc.--will be taken up in the chapter on conclusions. It does appear certain, however, that the field supervsion must be strengthened.

The Influence of Rural-Urban Residence

In order to determine to what extent radiophonic students

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[12] It might be argued that a larger number of inadequate field teachers were randomly selected into the sample than is typical of the universe and that the sample is not representative. In the calculations made by the author, 46 percent of the field teachers in the sample were inadequate, 33 percent adequate, and 21 percent good to outstanding. As a check of this sample distribution, the field supervisor rated 289 field teachers in the universe from which the sample was drawn on approximately the same dimensions. In this rating, 25 percent of the field teachers had already been substituted (since the study) for negligence or were recommendded for substitution; 34 percent were rated inadequate at least in some respect; 38 percent were rated adequate and 1 percent outstanding. Although the rating differed somewhat, it does support the conclusions of the sample.

Table 6.3 : Median Scores of Radiophonic Students on Certificate Examinations According to Rural and Urban Residence

Subject	Sixth Grade	
	Rural	Urban
	No. 157 Median	No. 39 Median
Spanish Language	72.6	74.6
Spanish Grammar	64.6	61.9
Mathematics	less than* 50.0	less than 50.0
Natural Sciences	64.1	66.1
Dominican Economy	less than 50.0	less than* 50.0
English		
Social Studies	54.7	53.9

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* Asterisk indicates that this appears to be the higher median of the pair.

Table 6.3 : Median Scores of Radiophonic Students on Certificate Examinations According to Rural and Urban Residence

Subject	Eighth Grade	
	Rural	Urban
	No. 74 Median	No. 28 Median
Spanish Language	69.2	72.5
Spanish Grammar	less than 50.0	55.0
Mathematics	less than 50.0	53.3
Natural Sciences	59.0	66.3
Dominican Economy		
English	53.3	50.0
Social Studies	62.8	65.0

of a rural background tend to suffer a cultural disadvantage which influences a lower level of academic achievement, the median grade scores of Santa Maria students in District II (there were virtually no urban students in the part of the sample in District I) were cross tabulated according to grade level and urban-rural residence.

As Table 6.3 indicates, at the sixth grade level, radiophonic students in urban areas have higher median grades in only two subjects, Spanish language and natural sciences, and virtually identical median grades in Dominican economy.

However, at the eighth grade level, urban students have significantly higher median grades in all of the subjects except English. The largest differences in median grades are in social studies, Spanish grammar, and mathematics.

These data tend to support the thesis that urban background is a factor in higher levels of academic achievement, but only at the intermediate level. One tentative interpretation of these results is that in the Santa Maria radiophonic system, eighth grade students, even among young adults, are generally somewhat older than sixth grade students and are more likely to be involved with adult roles in an urban context which bring them into contact with a broader universe of information and skills and reinforce what is learned in the school.

Two further lines of argument are suggested by these data: 1) students in the official system of schools since they are almost entirely urban residents tend to have a cultural advantage over the radiophonic students, 75 percent of whom are from peasant background; 2) the urban advantage tends to be more accentuated at more advanced levels of education and among older students. This may explain why, among the students in the official schools, the averaged median grade over a series of subjects of eighth grade students tends to be higher than than those of the sixth grade, but among the radiophonic students, the averaged median grade of eighth graders tends to be lower than that of the sixth grade.

HYPOTHESIS II: THE ACADEMIC ACHIEVEMENT OF GRADUATES OF THE RADIOPHONIC SCHOOLS IN PUBLIC AND PRIVATE SECONDARY SCHOOLS

The radiophonic schools of Santa Maria graduated the first class of eighth grade students in June of 1973, and almost immediately a considerable number of these graduates began to enter the public and private secondary schools and take advan- of the secondary school through correspondence courses, APEC. Since most of the graduates of Santa Maria are from rural communities they are tending to enter the secondary schools in small towns and rural parishes rather than in the larger public in the larger towns. Since, in order to draw a random sample of secondary schools with Santa Maria graduates enrolled in the last complete scholastic years, it would have been necessary to make a thorough survey--class by class--to determine where the graduates are, a purposive sample of different types of secondary schools was taken. Included in the sample were five schools, all but one having graduates in the first year in

1973/1974 and all have Santa Maria graduates in first and second year in 1974/1975: one, public operated by the government; two, public operated by rural parishes; one,private operated by religious; and APEC.

The estimate of the academic performance of Santa Maria graduates was based on whether they ranked above or below the general class average. The class average was calculated from the final course grades in the school records, and it was noted whether the final grades of the Santa Maria graduates were above or below the class average on each subject. For example, in the subject of Algebra, the average of a class of 120 students might be 75, and, of the ten Santa Maria graduates in the class, seven might have final grades above 75 and three below 75. A general class ranking of the Santa Maria graduates was calculated by adding the number of Santa Maria graduates above the class average on each subject and dividing by the number of subjects, and then doing the same with the graduates ranking below the class average. The general ranking of Santa Maria graduates usually turned out to be a fraction because a student might be above the class average in one subject and below in another.

The presentation of the results in Table 6.4 shows that of 39 graduates of Santa Maria in fourteen different classes slightly more than half, 46.32, ranked above the class average and 42.68 below the class average. The best showing of Santa Maria students was in the first year in 1973/1974 and this same group of students had a quite good record in their second year.

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	Above	Below
Lengua española	3	6
English	6	3
Algebra	8	1
Geometry	6	3
History	7	2
[illegible]	9	0
	39	15
	6.5	2.5
	[illegible]	

First year, 1973/1974

Public, government	9	6.5	2.5
	39		
Total [illegible]	48		

Table 6.4 : Number of Radiophonic Graduates in Secondary Schools Ranking Above and Below Their Class Average

Class and Type of School	Number of Students	No. Above Class Average	No. Below Class Average
First Year, 1973/1974			
Public, government	6	3.33	2.67
Private, religious	7	2.33	4.67
Public, parish	15	10.00	5.00
APEC	2	1.83	.17
	30	17.49	12.51
First Year, 1974/1975			
Public, government	14	5.17	8.83
Private, religious	2	1.33	.67
Public, parish	5	3.00	2.00
Public, parish	3	.67	2.33
APEC	1		1.00
	25	10.17	14.83
Second Year, 1974/1975			
Public, government	7	3.16	3.84
Private, religious	7	3.00	4.00
Public, parish	15	10.67	4.33
Public, parish	4	1.33	2.67
APEC	1	.50	.50
	34	18.66	15.34
Total in All Classes	89	46.32	42.68

The first year in 1974/1975 had the lowest ranking with respect to the class average.

These data are limited, and the analysis of cases of students indicate many individual factors influencing academic performance. The first class in 1973/1974 had the experience of only one course in the radiophonic schools. However, this is indicative that Santa Maria graduates have an academic performance which is equal to or slightly above that of their class in secondary schools. It was noted that very large numbers of Santa Maria graduates were in the first year in 1975/1976, more than 100 just in these five schools, and it is to be expected that an increasing number of radiophonic graduates will be entering secondary schools in the Dominican Republic. A more thorough study will be possible within two to three years.

Conclusions

These data generally support the the hypothesis that the radiophonic method of Santa Maria influences higher academic achievement than the conventional classroom method. An important factor in this, however, is the field teacher, and the results of radiophonic schools could be considerably improved by strengthening the selection, training, and supervision of field teachers.

Urban residence appears to influence higher academic achievement of radiophonic students at more advanced grade levels, and, as is discussed more fully in Appendix IV, there is some evidence that radiophonic students who have been enrolled for longer periods have progressively better academic achievement.

Radiophonic students tend to be strongest in Spanish language (reading) and in natural sciences, and it is likely that their having a type of text in the lesson sheets strengthens their capacities in these more discursive subjects. They are weakest in mathematics unless they have a good field teacher.

Eighth grade graduates of the radiophonic schools of Santa Maria who have entered secondary schools have levels of academic performance equal to or or slightly superior to that of the class in which they are enrolled.

CHAPTER VII

THE INFLUENCE OF THE RADIOPHONIC SCHOOLS OF SANTA MARIA IN SOCIAL ATTITUDES AND COMMUNITY PARTICIPATION

In the design of educational method, course content, and the support programming of the radio station, the teaching staff and directors of Santa Maria have given priority to an educational experience which permits the student to become aware of the deeper social processes which have made them marginal in education and other opportunities for human development in the Dominican Republic. Over the past years the radiophonic schools have especially emphasized as central themes participation in local organizations as a means of solving community problems; the forms of socio-economic dependence and liberation; family relations--above all, greater opportunities for self-realization for women and for adolescents in the home; and education as a means of human development, not simply economic advantage. Radio Santa Maria also expects the students, as part of their "required" educational program, to be more active in community organizations and to exert leadership. This chapter presents the results of an evaluation of the contribution of the radiophonic schools to change in social attitudes and greater community participation. More specifically, this analysis attempts to determine whether radiophonic students are any different in these respects than students in the official adult education program or different from the general population in rural communities.

Two different instruments were used to evaluate the radiophonic students (or ex-students) in relation to the two groups mentioned above, which were, in effect, two different studies. First, in the questionnaire filled out by the samples of both radiophonic and official students at the time of the application of the examinations a series of questions touched upon values and motives in education and upon the degree of participation in various community organizations. Second, in a more general study of the impact of the programming of the radio station on attitudes and values of the listening public, a subsample of 89 radiophonic students (and ex-students) were included in the total sample of 438 in four rural communities. In this study, which is reported at length elsewhere,[1] it was possible to compare radiophonic students with different periods of enrollment (and supposedly, thereby, different degrees of exposure to the influence in attitudes) with the general rural population regarding information, values, and behavior (actual implementation of information and values) in a series of dimensions: agriculture, health, community participation, religious modernization, and family relations.

Radiophonic Students Compared to Students in the Official Adult Education Program

The analysis of the results of the first study, comparing sixth and eighth grade students in the radiophonic schools of Santa Maria and in the official adult education program, shows little difference between the two groups in either values or value-oriented behavior. On the basis of a series of matched alternative choice questions in which students of both systems were asked to indicate motives in seeking an education along a scale of 1) monetary reward, 2) professional advancement, 3) community service, and 4) defense of rights of lower-status people, a scale of altruistic motivation in education was developed. Although the mean score of the sample of 464 students in the radiophonic schools was slightly higher than the sample of 324 students in the official system, 8.72 to 8.44, the difference is relatively small.[2] Nor does there appear to be any association of altruistic motivation in education and greater length of enrollment in the program of Radio Santa Maria. Among sixth grade students the Pearson correlation between altruistic motivation and number of grade courses enrolled is -.058, a slightly negative correlation, and among eighth grade students, .104. Only among eighth grade students in District II (a group with low levels of academic achievement) is there a level of association with some significance, .150.

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[1] Robert A. White, "Influence of Radio Santa Maria on Attitudes and Values," Unpublished Report, La Vega, 1976.

Surprisingly, the radiophonic students show no greater level of participation or leadership in community organizations.

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[2] Although the difference between the two means is statistically significant (Student's "t" of 2.70, one tailed test, significant at the .005 level), this is to be expected with samples this large. The question here is whether the absolute difference of the means has empirical significance.

The most common type of participation is in the youth clubs which are found in both rural communities and urban neighborhoods. Among the students in the official schools, 42.9 percent say they are participating in youth clubs, while 39.1 percent of the radiophonic students indicate this kind of organizational participation. However, a far greater percentage of radiophonic students say that they are participating in religious organizations: 41.6 percent compared to 16.4 percent of the official students. In the question of leadership positions in local organizations, the percentages are again quite similar: 39.0 among official students and 44.0 percent among radiophonic students.

The similarity between the two groups of students continues with the more indirect indicators of value orientations such as the subject matter which is thought to be of greatest future value in life: both place the highest value on mathematics, 59.4 percent of the official students and 51.2 percent of the radiophonic students, and, secondly, on Spanish language, 15.6 among official students and 18.8 among radiophonic students. Both groups place little value on social studies: 4.1 percent among official students and 4.4 percent among radiophonic students.

Radiophonic Students Compared With the General Rural Population

When the mean scores of radiophonic students on a series of scales measuring leadership initiative in rural communities, awareness of community problems and alternative solutions, acceptance of values implicit in a Theology of Liberation, and greater religious knowledge, are compared with the mean scores of the rest of the sample of rural communities, the mean scores tend to be significantly higher on these measures. In Table 7.1 the mean scores for five selected measures are presented showing that the longer the period of enrollment, the higher the mean scores (although the trend is not always consistent).

Analysis of other value variables indicates that radiophonic students with longer periods of enrollment have somewhat higher mean scores in community solidarity and trust in people, greater respect for the expression of youth in the family, greater acceptance of the self-realization of women in the family, positive identification with agrarian reform and defense of small farmers' rights, and a positive attitude toward improved health practices. However, the differences are are quite moderate and these attitudes probably have little real influence in the total personality of the radiophonic students. There is a very slight relationship with a general sense of campesino class solidarity and greater health information, but, again, the relationship is so weak as to indicate at best a passive response.

Radiophonic enrollment has no relationship with greater agricultural technical information, knowledge of small farmer legal rights, actual participation in small farmer interest group activities, health practices (as opposed to attitudes and knowledge), and practices allowing youth more freedom in

Table 7.1 : Comparison of Mean Scores of Radiophonic Students on Measures of Community Participation and Values with Mean Scores of Rural Population Never Enrolled in Radiophonic Schools.

	Length of Enrollment in Radiophonic Schools			
Community Participation and Value-Orientations	Never enrolled in radio school		Enrolled but did not complete course	
	No.	Mean score	No.	Mean Score
1. Awareness of Community Problems	339	5.62	32	5.59
2. Awareness of Solutions to Problems		14.15		12.94
3. Taking initiative in leadership		7.61		7.72
4. Knowledge of how to manage organizations		4.48		4.44
5. Religious motivation toward structural change		15.12		15.44
6. Level of religious knowledge	251	7.94	25	7.88

Table 7.1 : Comparison of Mean Scores of Radiophonic Students on Measures of Community Participation and Values with Mean Scores of Rural Population Never Enrolled in Radiophonic Schools.

Community Participation and Value-Orientations	Length of Enrollment in Radiophonic Schools					
	Completed ONE course		Completed TWO courses		Completed THREE or more courses	
	No.	Mean Score	No.	Mean Score	No.	Mean Score
1. Awareness of Community Problems	31	6.58*	22	6.31	14	7.14**
2. Awareness of Solutions to Problems		14.74		15.45		16.07*
3. Taking initiative in leadership		8.90**		8.50*		9.43*
4. Knowledge of how to manage organizations		5.77*		5.22		6.93***
5. Religious motivation toward structural change		17.45***		16.18		17.93**
6. Level of religious knowledge	23	9.87*	16	7.44	7	10.57*

* p = .05; ** p = .01; *** p = .001

in the home. In general, longer radiophonic enrollment has an association with increased information regarding community problems, health, and agriculture, and a positive attitude toward greater freedom for "minority" members of the family (women and youth), but virtually no relationship with indicators of actual implementation of these recommended practices.

The higher mean scores of radiophonic students with regard to the selected change oriented values presented in Table 7.1 indicates an association of longer radiophonic enrollment and a greater commitment to social change, but it does not necessarily mean that longer radiophonic enrollment is the precise causal factor. Many of the most dedicated students are also active in community organizations and are influenced by other change agencies. To test the proposition that the higher scores of radiophonic students on the change variables in Table 7.1 are associated precisely with the length of enrollment this variable was entered into a regression analysis along with a series of other independent variables thought to be important: degree of participation in community organizations, participation in motivational courses, etc.

This analysis, which is summarized briefly here, shows that when the influence of other significant variables is controlled, the relationship between length of enrollment and the variables of initiative in leadership, awareness of community problems and awareness of solutions disappears entirely. Length of enrollment does continue to have some relationship with greater religious knowledge and, especially, the commitment to social change based on religious motivation. Nevertheless, by far the most important factor in religious knowledge and social change orientation is the level of participation in community organizations.

The fact that the social change dimension of Radio Santa Maria should have its greatest impact in the area of religiously related contexts is to be expected since the discussion of the central theme in the lesson sheet has had a strong theological-philosophical background and is most closely integrated with the subject of religion. It is likely that the participation of many of the radiophonic students in young people's religious organizations reinforces this particular influence of the radiophonic classes.

Conclusions

In general, there is little evidence that radiophonic students have significantly different value orientations or greater community participation than the young adults in other educational programs. Nor is there evidence that the length of enrollment is the most significant factor in somewhat stronger community orientation. However, there does seem to be a definite though moderate influence by the central theme in religiously-based orientation toward structural change in the Dominican Republic.

Other observations lead to the conclusion that radiophonic students are more aggressive rural youth who are interested in obtaining the basic education and--above all--the certificate which will satisfy their upwardly mobile aspirations. As was noted above, many tend to look upon the central theme as taking time from the more essential subjects. In the pressure to gain a sufficient grasp of the material in order to pass the examination, it is easy for teachers and students to relegate the central theme to a position of superfluity.

Among the radiophonic students there are certainly some who are attracted by the discussions of the central theme and who gain a far greater awareness of the need for social change. Field teachers note that the students who also participate in community organizations--usually the somewhat more mature students--are those who are interested in and follow the discussion of the central theme in the weekly interchange. This indicates that participation in community organizations is important if students are going to gain the greatest benefit from the Santa Maria educational program. In some cases the youth clubs and other community organizations have taken the material of the central theme in the lesson sheets as the basis for group discussion, and it may be that the significance of this dimension of the program of Santa Maria is that it provides study materials for community organizations. Although Radio Santa Maria has as an objective that the learning process be directly extended into community organizations, it appears that this is not being done on any systematic and coordinated basis.

A second problem with the approach of Santa Maria in concientisation is that it does not represent an integrated curriculum reform nor does it arise out of the perceptions of reality of the students. Rather it is an interpretation of reality which is decided on by the teaching staff and presented vertically to the student.

A further problem is that many of the teaching staff, hired primarily for their technical capacity are not sufficiently versed in the background of the central theme or even with the reality of the rural communities to make an integration of the material of the lesson sheets and daily broadcasts with the central theme. Much of this integration must come from the director and the directors are conscious that considerably more reflection is necessary to determine what is being attempted in the central theme.

Field teachers are not trained in the use of non-directive or concientisation methods or even in the educational philosophy of Santa Maria but are contracted to answer student questions in the subject matter. Until a more systematic training program for field teachers is introduced, only the most socially aware field teachers who are occasionally encountered will be able to offer the young students a real role model in a new set of attitudes and values.

Finally, the structural conditions established by the national development policy described in Chapter I is a major factor in determining what kind of values and motivations develop. Official policy tends to have a most reserved attitude toward independent popular organizations representing local community or lower-status rural interests. For example, there is little explicit and consistent policy of providing funds for groups which organize for community improvement. In this context, motivation toward entusiastic participation in community organizations to solve problems can only lead to frustration, and values of fatalism may be more realistic that those of communal activism.

CHAPTER VIII

THE COMPARATIVE FINANCIAL COSTS OF RADIOPHONIC AND CONVENTIONAL CLASSROOM SYSTEMS

One of the major expected benefits of radiophonic systems of education similar to that of Santa Maria is the greatly reduced financial cost per student. The major economies are in the use of a small number of quality teachers, the relatively reduced supervisory staff, and eliminating the need for classrooms and much equipment. By reducing the costs in these areas, it is possible to provide other needed facilities such as textbooks and to extend an educational opportunity to groups otherwise excluded by conventional methods.

In this chapter an analysis will be made of the costs of duplicating a radiophonic system of education, structured along the lines of Santa Maria, in a country which has relatively the same wage scale and economy as that of the Dominican Republic. Then, the cost per student of this system will be compared with the cost per student of an adult education program having a comparable size student body but using conventional classroom methods. A comparable adult education system in the Dominican Republic using classroom methods is that of the Secretariat of Education which has already served as the basis of comparison of levels of academic achievement. It will then be possible to equate, in general terms, the relative costs with the relative levels of academic achievement obtained.

Notes on the Methodology of This Cost Analysis

The cost of duplicating the system of Santa Maria must necessarily be based on extrapolation because Radio Santa Maria has been able to reduce costs in a way which may be imitated, but cannot be expected to be available to many public or private institutions. For example, because Radio Santa Maria has its central office in a provincial city, its personnel and other service costs are somewhat lower, and it has been able to attract staff on the basis of religious or altruistic motivations. Salaries and other costs are estimated at levels necessary to obtain capable and dedicated educational administrators and teachers in a country with economic levels similar to those in the Dominican Republic.

The cost analysis is limited to current operational costs excluding initial capital investment in buildings and equipment since it was virtually impossible to obtain reliable comparable data on this from both Radio Santa Maria and the Secretariat of Education. However, in the cost analysis of Radio Santa Maria, the expenditures of depreciation or replacement value are included in the calculation of the current expenditure.

The cost analysis of Radio Santa Maria is based on the present organization and personnel except in those cases where the evaluation has indicated that an increase of personnel is recommended, for example, in the number of field supervisors. (Cf. Chapter IV). However, projections are made on the basis of an enrollment expanding from 5,000 to 10,000 and then to 20,000 and 40,000.

The organization of the administrative system is envisaged as expanding from the one central office at an enrollment of 5,000 to the central office, one major regional center, and two minor regional centers with an enrollment of 40,000. At a 40,000 enrollment, the central office would be responsible for the supervision of approximately 15,000 students; the major regional center, 10,000; and each of the two minor regional centers, 7,500 students each. A more detailed breakdown of the projections of administrative and supervisory personnel at various enrollment levels is found in Appendix V.

Projected Financial Costs of The Santa Maria Model of Radiophonic Schools

In Table 8.1 the costs in each major category of personnel, services, supplies and equipment are projected for an enrollment ranging from 5,000 to 40,000. The cost per student in the radiophonic system decreases rapidly with the number of students enrolled because the administration and, most important, the teaching staff, broadcasting, and printing are fixed costs. With only 5,000 students the costs are US$38.65 per student, but this declines to US$12.45 per student with 40,000 enrollment. It is important, then, in planning a radiophonic system that for greatest efficiency an enrollment of at least

Table 8.1: Projected Financial Costs of the Santa Maria Radiophonic Model With Enrollments up to 40,000

Cost Items	Enrollment Level			
	5,000	10,000	20,000	40,000
Personnel				
Central Administration	US$29,900	US$29,900	US$29,900	US$29,900
Teaching Staff	49,400	49,400	49,400	49,400
Central Records	7,800	12,700	16,900	24,700
Supervision	14,300	20,800	64,300	105,250
Printing and Distribution	9,750	11,700	14,300	17,200
Equipment and Supplies				
Printing supplies and paper	18,000	30,000	54,000	102,000
Preparation of Masters	4,800	4,800	4,800	4,800
Broadcasting	37,200	37,200	50,400	88,800
Office supplies	600	900	1,200	1,500
Depreciation	4,800	6,000	7,500	12,500
Building, lights, telephone	6,000	6,000	8,400	13,200
Public relations	9,000	17,000	25,000	38,000
Contingency Fund	3,000	6,000	9,000	12,000
TOTAL: US$	194,550	232,400	335,100	499,250

Table 8.2: Costs Per Student in the Santa Maria Radiophonic Model With Enrollments Up To 40,000

	Enrollment Level			
	5,000	10,000	20,000	40,000
Cost per student enrolled	US$ 38.91	23.24	16.75	12.48
Cost per student promoted	US$ 59.86	35.75	25.77	19.20

10,000 be envisaged.

The cost per promoted student (Cf. Table 8.2) varies with the efficiency in retaining the enrolled students. With the average retention rate of 65 percent which the radiophonic schools of Santa Maria have, the cost per student promoted declines from US$ 59.86 with 5,000 enrolled to US$ 19.20 with 40,000 enrolled.

If some educational planners feel that this cost per student is still relatively high, it should be recalled that these are estimates with the ideal number of staff and relatively high salaries. In 1975, with approximately 20,000 students enrolled, Radio Santa Maria maintained its system with total expenditures of US$ 84,000 which, with 11,937 students promoted, is a cost per student promoted of US$ 7.03. Even with current rising costs, the figure is approximately US$ 8.00 per student promoted. With careful administration, it is possible to reduce costs below those projected here. In each case, it is necessary to calculate the most efficient balance between the marginal increase of levels of academic achievement that can be obtained with each increase of expenditure in personnel, equipment, and supplies. As in any economic equation, this depends on the resources available and the results which must be obtained or are considered desireable.

Comparison of Financial Costs of the Santa Maria Model of Radiophonic Schools With the Costs of Conventional Classroom Methods

The National Office of Adult Education in the Secretariat of Education of the Dominican Republic was able to provide, within the time schedule of this study, only global budget figures, and the system of accounting did not easily lend itself to determining the exact cost of the graded night school program which is comparable to the program of Radio Santa Maria. However, when estimates of the cost of auxilary programs of adult education such as the women's vocational courses are discounted, the estimated budget allowed for the night school and the costs per student are those presented in Table 8.3. These figures are current expenditures, and do not include the investment in buildings which are a necessary fixture for the classroom method (but in this case, are borrowed from day school program).

Over a period of five years enrollment remained much the

Table 8.3: Total Estimated Night School Budget, Enrollment, and Cost Per Student of the Adult Education Program of the Secretariat of Education From 1970 to 1974

	1970	1971	1972	1973	1974
Total estimated Budget	US$ 629,331	629,331	664,316	916,745	1,044,788
Students Enrolled	37,013	36,466	36,362	39,176	40,561
Students Promoted	22,137	24,176	22,712	22,749	25,274
Cost per Student Enrolled	US$ 17.00	17.25	18.27	23.40	25.75
Cost per Student Promoted	US$ 28.43	26.03	29.25	40.29	41.34

same and the budget increased at what one may judge to be about the increase in number of teachers with allowance for the relatively high rate of inflation in the Dominican Republic over these years. However approximate these budget estimates may be, the conslusion is well-founded that in the conventional classroom system, costs increase proportionally with enrollment largely because the teachers and supervision are relatively fixed costs. This is in contrast to the radiophonic system in which costs decrease with increased enrollment.

With the factor of inflation and the margin of error possible in these estimates, the best comparison with the radio-phonic system is to take the year, 1974, when enrollment in the adult education program of the Secretariat of Education is at 40,000, and compare this with the costs at 40,000 enrollment in the radiophonic system. In the year 1974, the cost per student enrolled in the system with the conventional classroom method is US$ 25.75, approximately double the US$ 12.45 in the radiophonic system.when enrollment is at 40,000. The adult education program of the Secretariat of Education has a retention rate of about 65 percent, much the same as the radiophonic system of Santa Maria. The comparative costs per student promoted in the two systems at 40,000 enrollment is US$ 41.34 and US$ 19.15.

It should be noted, however, that if a radiophonic system has an enrollment of only 10,000 students, the costs do not differ greatly from the conventional method.

In these comparisons, it should be considered that the radiophonic model of Santa Maria puts into the hands of the student a combination textbook-exercise workbook. At present the students in the adult education program of the Secretariat of Education generally have no texts. The texts which were being sold to the students in the official adult education program had a cost of about US$ 7.00 per student, approximately the same as the cost, to the student in the radiophonic system, of one graded course.

CONCLUSIONS

INNOVATIVE CONTRIBUTIONS OF THE SANTA MARIA MODEL TO LIFELONG AND RADIOPHONIC EDUCATION

Perhaps a key motif in the recent discussion of lifelong education is the revitalization of the perception of the human personality as always young and growing and always capable of new learning experiences. Education is the effort of the social context--the family, the community, the nation, and other institutions--to provide opportunities for this continual self-realization. One of the heresies of the technical-industrial era is that education is the preparation of the young for society (and society understood as an industrial production effort), and the burden is upon the individual to respond to educational institutions. The present study has centered around the question of how educational institutions can respond to the growth needs of individuals all along the life trajectory. The Santa Maria model of radiophonic adult education has, itself, taken many ideas from institutions in Latin America and other parts of the world, notably the ECCA system in the Canary Islands, but it seems to have caught a number of important dimensions of this responsiveness to current educational needs. This concluding chapter is a reflection on what appear to be innovative approaches in adult education and how these might be further developed.

Ability to Respond Rapidly to An Educational Need

An important condition in lifelong education is the institutional capability to determine the specific educational needs of a particular population segment and then rapidly develop the curriculum, educational methodology, and communication techniques which are necessary to deliver this educational opportunity. The experience of Radio Santa Maria indicates that it is first necessary to analyse what the priority educational needs are and what the motivations and aspirations of this group are--in the particular socio-cultural context. Santa Maria decided that the priority need--although it is responding to other groups with other programs--was an upper primary and intermediate level education for young adults, especially in rural communities, whose avenues toward technical and professional positions and rural leadership were blocked. The personal aspirations of many thousands of talented youth were not being responded to precisely because education was conceived of in terms of classrooms and teachers and it was impossible to extend this kind of system in rural areas. Even in towns and cities, the severe lack of funds of the official adult education program for teachers was a limitation. In this context the official certificate, which is the key to entering secondary schools and obtaining professional employment was a central motivation so that the program had to be designed in coordination with the official curriculum of the Secretariat of Education.

Often one of the major obstacles to extending an educational opportunity rapidly is that, although its methodology may be excellent, the original design is so economically inefficient and requires so much special investment or training of personnel that as it expands there are immediate limitations and only a few benefit. Radio Santa Maria has been especially careful in designing a system of administration and supervisory personnel which is economical as it expands. Each possible innovation in the program is analysed to determine if the marginal increase in benefits, in terms of levels of academic achievement, etc., justifies the increased expenditure.

Among Latin American radiophonic schools, the Santa Maria model has been somewhat unique in asking a monetary contribution from the student to cover the field teacher expenses and some of the expenses of the printed and broadcast learning instruments. Some educational planners may be hesitant about introducing such a system of student fees in part because it may be an obstacle to some potential students and because it is a type of motivation which may, in the opinion of some, conflict with the overall goals of community and class service. Apart from the fact that Radio Santa Maria is a private institution and must find its own support, some monetary contribution (or its equivalent) may be important because of the mutual responsibility established between students, field teacher, and the central office and, thereby, lowering the need for field supervisory personnel. Both public and private adult education efforts are encountering problems in extending and maintaining a series of highly flexible programs because of a shortage of resources typical of less developed countries. Although a student fee must be low--not more than a few days wages calculated at the wage levels actually paid--it may be the necessary condition for making the educational opportunity available at all. Costs can be kept low if there is a motivation factor and the design is efficient. Radio Santa Maria has been able, until now, to pay all of its own operational costs from in-country sources and has much more flexibility in its planning and its extension in the country because it does not depend entirely on the decisions of international agencies.

Another factor in the rapid extension of the Santa Maria model in the Dominican Republic has been the working through existing organizations. This, again, has reduced the need for field supervisory personnel. Since there is often a considerable amount of ignorance and skepticism regarding unconventional educational opportunities, the introduction of the radiophonic system at the advanced grade levels has required a special education through organizations, the mass media, and other promotional efforts.

It is important to take into consideration, however, that any adult education opportunity is going to have a more limited response that all the people who theoretically "need" such an education. Although the great majority of people in rural areas of the Dominican Republic have not finished the fourth grade of formal education, only a small percentage of these feel that the precise answer to their needs is this kind of adult education. Enrollment in the radiophonic primary and intermediate level program in the Dominican Republic is likely to increase to between 25,000 and 35,000 and then decline as the need is satisfied. It is important that institutions such as Radio Santa Maria, which have the organizational capacity and technical facilities, be continually analysing other needs, other key motivations, and be designing other educational programs to constantly respond to the great variety of education needs both young people and adults may have.

Innovations in Curriculum and Educational Methodologies

Although radiophonic methods have been used in Latin America for alfabetization and, to some extent, in the lower grades, this medium had not been adapted to the advanced primary and intermediate grades. Santa Maria has attempted to combine six different learning experiences which would respond to every facet of the human personality and contribute to a balanced personal development: 1) extensive printed materials, 2) broadcast classes, 3) the personal guidance of a field teacher; 4) group discussion; 5) broader educational and cultural programming; and 6) participation in community organizations. Not all of these learning experiences have been equally perfected, and in some there remain much to be done.

Perhaps the greatest progress has been in the printed study materials and the broadcast classes. These are designed to provide an audio-visual, written, and oral learning experience and develop in the student a pattern of logical analysis. Having in the hand printed materials explains why the radiophonic students generally tend to be consistently superior to other adult education students in more discursive subjects such as Spanish language and natural sciences.

Ideally the Santa Maria system teaches young students how to combine various learning experiences and how to aggressively integrate a series of learning experiences throughout a lifetime.

Developing an innovative curriculum which really responds to individual needs and the socio-cultural context presents some difficulties since this must present material which will prepare students for the secondary school curriculum, which, in turn, is geared toward the university. Santa Maria has been particularly concerned--at this educational level which so emphasizes the accumulation of a mass of disconnected facts--to develop capacities for a personal integration of subject materials, a habit of deeper personal reflection, and a critical awareness of the relationship of the subject matter to the social context of the country. The principal instrument for this is the "central theme" technique which is woven through all of the six learning experiences.

The type of curriculum reform which Santa Maria has attempted is formidable, and the results of the evaluation of attitudinal changes and community participation, as well as more direct personal observations consistently lead to the conclusion that the central theme technique must be considerably improved or a broader curriculum reform embarked upon.

The central theme is essentially an added subject which is only peripherally integrated with some of the subject matters. The central theme tends to be decided upon in the office of the teaching staff and to become one more set of facts to be learned rather than a habitual approach to reality, that is, a true critical awareness. Although the psycho-social method has been adapted to the radiophonic media at the literacy and basic functional education level, little work has been done in a profound curriculum restructuring--involving some adaptation of the psycho-social method--at the advanced primary and secondary levels. This reform would probably require the collaboration of institutions beyond the Radio Santa Maria staff, but it would represent a major contribution in view of the fact that radiophonic schools must increasingly move away from literacy to different levels of education.

Whatever changes are made in the central theme approach, it will be necessary to take into consideration the various age levels of the students and the considerable differences in sociocultural background. Also, the context of a formal graded system which motivates students to work to pass examinations and obtain certificates and the structural conditions of the country in question--which determine by national policy what opportunities there may be and therefore what motivations will be responded to--

must be taken into consideration.

The Field Teacher

The system of field teachers, who are intended to be purely supplemental to the broadcast classes and to respond to individual learning needs, is one of the most attractive possibilities in the Santa Maria system because it frees the local teacher from the necessity of spending time giving or supervising a class and allows more direct personal guidance. The evaluation shows that the field teacher is playing a most important role in the Santa Maria system--perhaps more important than the directors of Radio Santa Maria have been aware. In radiophonic sectors where the field teachers were not functioning well, the Santa Maria students showed a marked academic deficiency.

From observations and discussions with field teachers, it appears that many cannot find the time to review the daily exercises of the students and the practice of responding to the students questioning tends to lead to greater attention to the older, and more aggressive students. At times, the weaker students do not know how to phrase a question or are ashamed to reveal their lack of knowledge in the interchange. If a student's lack of grasp of some part of the material is not caught early in the course, it is difficult to follow the progress of the lesson sheets and the daily broadcasts so that the course becomes an unintelligible jumble.

At present there appears to be great divergence in the thoroughness of the field teachers in the weekly interchanges.

It is possible to take hundreds of different individuals who are quasi-volunteers and develop them as a tutorial force capable of helping students to achieve relatively standard academic results, but the methodology of diagnosis of student progress, personal guidance, and motivation must be further analysed and systematized. The method of training of field teachers through their own "correspondence course" and "broadcast explanation" is most interesting, and it is virtually the only efficient and economical means of training them under the present circumstances. This method might be somewhat more formalized and recognition given to field teachers for the training and experience they have received. However, it appears necessary to have at least a thorough introductory course in order to establish field teacher identification with Radio Santa Maria and lay the foundation for future training through the correspondence material and the radio.

Field Supervision

Another attractive aspect of the Santa Maria system, touched upon above, is the efficiency of the method of field supervision. By relying on a central records department which receives systematic weekly and monthly reports from field teachers, supervisors become supplementary and have their field work more specifically defined for them. In this manner one supervisor can quite effectively supervise 75 sectors with a student enrollment of 3,000 to 3,750. At present, with a total enrollment of approximately 22,000, Radio Santa Maria could adequately supervise and even provide training courses with six to eight field supervisors. This contrasts with the approximately 55 supervisors which the conventional classroom method requires primarily for the night school program of the National Office of Adult Education in the Dominican Republic.

As a final word, the fundamental innovativeness of the Santa Maria model of adult education is that it combines six different learning experiences. Some of these, such as the field teacher and the greater integration of students with the local community organizations, need considerably more analysis and development. However, the data of this study shows that when these different learning experiences combine and interact with each other, the levels of academic achievement of students in the radiophonic system and their level of critical social awareness are notably above that of students in the conventional classroom system. Radio Santa Maria has had only four or five years in which to develop these educational innovations. It is to be expected that there will be considerable development in the methodology which is implied in the basic objectives outlined at the outset in 1970.

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APPENDIX I

ENROLLMENT AND PROMOTION STATISTICS OF THE NATIONAL OFFICE OF ADULT EDUCATION IN

THE

SECRETARIAT OF EDUCATION, FINE ARTS, AND WORSHIP

GOVERNMENT OF THE DOMINICAN REPUBLIC

S C H O O L S

	1968		1969		1970		1971	
	Urb.	Ru.	Urb.	Ru.	Urb.	Ru.	Urb.	Ru.
Primary and Intermediate Levels	245	160	200	154	205	210	200	182

	1972		1973		1974		1975	
	Urb.	Ru.	Urb.	Ru.	Urb.	Ru.	Urb.	Ru.
Primary and Intermediate Levels	197	177	281	156	212	103	244	192

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ENROLLMENT

	1968		1969		1970		1971	
Grades *	Urb.	Ru.	Urb.	Ru.	Urb.	Ru.	Urb.	Ru.
Literacy	7116	2864	9061	5917	5956	2990	5138	2191
First Level	4874	1428	5020	1215	4961	1540	5075	1285
Sec. Level	7842	767	7459	822	6904	954	7022	1182
Third Level	6718	260	6752	334	6752	420	6907	411
Seventh	1794	74	3069	216	3276	156	3350	243
Eighth	1824	39	2263	88	2892	212	3485	177
TOTAL	30168	5432	33624	8592	30741	6272	30977	5489

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*First Level ordinarily includes first and second grade; Second Level includes third and fourth grades; and Third Level, fifth and sixth grades.

ENROLLMENT Cont.

Grades	1972		1973		1974		1975	
	Urb.	Ru.	Urb.	Ru.	Urb.	Ru.	Urb.	Ru.
Literacy	5410	1845	5596	2206	2884	1919	6872	2182
First Level	5147	1182	4717	1110	4969	1023	6130	1379
Sec. Level	7096	927	7601	651	8249	596	10003	824
Third Level	6813	258	7678	351	8233	292	9614	394
Seventh	3398	275	4579	293	4469	248	5864	132
Eighth	3732	279	4227	167	4518	161	5452	215
TOTAL	31596	4766	34398	4778	36322	4239	43935	5126

*First Level ordinarily includes first and second grade; Second Level includes third and fourth grades; and Third Level, fifth and sixth grades.

STUDENTS PROMOTED

Grades	1968		1969		1970		1971	
	Urb.	Ru.	Urb.	Ru.	Urb.	Ru.	Urb.	Ru.
Literacy	4417	1642	4842	1526	3827	1845	3295	1661
First Level	3204	1017	3405	771	3036	975	3201	857
Sec. Level	5449	546	5254	564	4327	629	4312	729
Third Level	3520	169	3621	205	2896	171	3003	174
Seventh	1225	34	2340	171	2164	121	2293	105
Eighth	1137	29	1481	82	1960	186	2079	69
TOTAL	18952	3437	20946	3319	18210	3927	19183	3595

Grades	1972		1973		1974		1975	
	Urb.	Ru.	Urb.	Ru.	Urb.	Ru.	Urb.	Ru.
Literacy	3729	1049	3142	1563	3574	1354	4083	1514
First Level	3191	693	3175	619	3237	756	4005	906
Sec. Level	4759	593	4903	427	5404	367	6687	613
Third Level	3673	114	3799	126	4159	206	5251	367
Seventh	2190	162	2357	193	3001	192	4004	181
Eighth	2436	123	2357	88	2913	111	3761	153
TOTAL	19978	2734	197[illegible]3	3016	22288	2986	27791	3634

Administrative and Teaching Personnel

	1968	1969	1970	1971	1972	1973	1974	1975
General Administration	2	2	2	2	2	2	2	2
Technical and Subordinate Administrators	5	5	5	8	8	8	8	8
Office Personnel	7	7	8	9	9	9	10	7
Regional Supervisors	4	4	4	5	6	6	6	22
Zone Supervisors	37	40	38	45	42	44	45	47
School Directors	42	60	60	60	63	65	70	77
Teachers	1245	1261	1341	1369	1302	1324	1383	1739

APPENDIX II

SAMPLES OF WEEKLY LESSON SHEETS OF THE RADIOPHONIC SCHOOLS

1. The Lesson Sheet of the First Week Introducing the Student to the Radiophonic Method
2. Weekly Lesson Sheets of the Fourth Grade
3. Weekly Lesson Sheets of the Eighth Grade

APPENDIX III

THE SEMI-FORMAL AND NON-FORMAL MODELS OF ADULT EDUCATION OF RADIO SANTA MARIA

Although this case study and evaluation has focused primarily on the more formal, graded program of primary and intermediate education, Radio Santa Maria has developed a series of other semi-formal and non-formal models of adult education which are significantly innovative. These vary in the degree of formal structure, but all follow, in some way, the basic format of the six basic learning experiences: 1) the distribution of printed material which is the basic study instrument --similar to the weekly lesson sheets of the primary-intermediate program; 2) broadcast classes at a regular hour; 3) a local "field teacher" or general coordinator; 4) at least an occasional discussion meeting similar to the weekly interchange; 5) the background of other programming of the radio station; 6) participation in a formal organizational structure in the rural community.

The daily programming of Radio Santa Maria embodies in some degree all of these learning experiences, but in what might describe as a descending order of structure and formality:

1. Training programs for particular forms of rural leadership;
2. The "University for All" daily program;

3. The organizational information programs such as the program of the Peasant Leagues.
4. Entertainment and/or light informational programs directed to a particular population segment such as youth, housewives, farmers, etc.;
5. News and social commentary;
6. Entertainment programs, but with a definite value or social orientation, such as the afternoon youth program, "Canta Libre" (Sing free) with occasional social commentary as part of the disc jockey patter.
7. "Bulletin board" programs with personal and organizational announcements;
8. Pure entertainment at a popular, "peasant" or "urban" level, but with good taste.

Of these [illegible] approaches the model with especially interesting possibilities is that presently used for training religious teachers in rural communities but which will be extended to agricultural education and other areas. The basic elements of this model, as exemplified in the religious training program, "Asamblea Cristiana" (Christian Assembly), are adaptations of the six basic learning experiences.

As in the other programs, the first step is the definition of a particular population group with a definite motivation toward a type of education. The "Christian Assembly" is directed to individuals who have a defined role in the community, religion teachers, not simply to "whoever may be interested or may happen to turn on the radio." This group constitutes a "student body" which is motivated (seeking some concrete reward analogous to "getting an official primary school certificate") to learn a body of information and orientations.

These religion teachers have at least an accepted role in the parish if they are not actually named by the pastors, and there is a traditional prestige attached to this role. The motivation is stimulated by the attractiveness of the program, but it is based on being prepared for a role within a particular institution guided by specific values. Many pastors now suggest or request that the religious education teachers enroll in this training program.

There is no official enrollment and the program continues indefinitely. Enrollment is constituted by obtaining the booklet and participating in the other aspects of the program. At present, approximately 15,000 religious teachers or other religious leaders in the Catholic Church are involved in the program in some way (based on the number of booklets distributed).

The program is also closely coordinated with several training centers for religious teachers and the program is, in some cases, defined as the "follow up" for the initial training program.

1. The Text or Reading Material

Every educational program of Radio Santa Maria is based on a printed text so that Santa Maria is as much an editorial and printing institution as a radio broadcasting station. The broadcast class is always the compliment of reading matter. This illustrates why the other programs of Radio Santa Maria are an essential reinforcement of an adult education program, and help the adults who have passed through the formal graded program maintain their functional literacy.

The text, in the case of the "Christian Assembly" program for the teachers of religion is a booklet published three times a year with a series of 50 lessons, each covering two pages. This booklet is attractively printed with ample pen sketches but economically; Like the other printed materials it is sold to the student at cost, US$ .50, so that all printing costs are covered. Purchasing the booklet implies a definite commitment to follow the course. The fact that 15,000 booklets are sold every three months indicates that there is both capacity and demand in the Dominican Republic.

Over a period of a year there are three programs a week, and the individual is free to use the booklet with the program or apart or however he or she wishes. With the end of each three-month period, many pastors have a form of "examination" (or other religious leaders may perform this function) and a certificate of recognition is awarded the religion teacher.

2. The Broadcast Classes

The half-hour classes are broadcast three times a week at an evening hour which is convenient for the students, although programming on a station with a single frequency presents a problem. The broadcast format is similar to that of the primary school classes, a dialogue between a male and female voice following and explaining the.written material in the lesson of the day. This program, since it is less structured and depends much on attracting the student uses the radio drama much more frequently. Many of the broadcasting teachers are teachers in the catequetical institute so that the ordinary radio staff is assisted by trained outside personnel.

3. Field Teacher and Weekly Interchange

Although this model is designed to have some local supervision, the Christian Assembly program has none. There is an occasional meeting of the participants in the program in a meeting, but more in the line of discussion and reflection.

It is easy to see that if this were adapted for an agricultural education program, the local agronomist or paraprofessional could serve as the field teacher.

4. Participation in Local Organizations

Where this type of program is strongest is that it is specifically working with an organizational structure with a set of roles having a defined attitudes and behaviors. It can thus move much more directly towards attitudes and values that are an expected part of this institutional structure and expect the listener to accept them. There is already a commitment to receiving the values. This is in contrast with the primary and intermediate level educational program which has no direct connection with community organizations and is still preparing individuals for an indefinite futre. The formal program is quite instrumental as far as the personality is concerned.

In the evaluation of the impact of Radio Santa Maria on attitudes and values, the participants in this program had significantly higher mean scores measuring the informational and value dimension communicated in the program. That is, the two factors of organizational participation and the radio program are directly associated and the two reinforce each other.

Radio Santa Maria is presently planning to extend this model to agricultural education: the publication of a semi-annual instructional booklet, a regular broadcast class, close coordination with an organizational structure,etc. It is easy to see how this model could be extended to training women in homemaker's clubs, and a series of other groups.

The "University for All" Program

A second model of radio education which is cast in an even less formalized structure than the program for training religion teachers and rural leaders but still maintaining a very definite educational methodology within the framework of the six learning experiences is the Universidad Para Todos (UPT) or "University for All."

As in the case of the radiophonic schools and the training program for religion teachers, the University for All is directed to a specific "group" with motivation for a specific kind of education: the adult rural,lower-status person seeking a social and personal integration in the face of the disturbing effects of increasing urban penetration and a rapidly changing society. Like the more formal programs, the University for All is preparing adults for new roles and attempts to respond to the motivation that rural adults have for seeking these new roles. However, in this case the roles and the particular needs are defined much more broadly and the emphasis is less a specific, more objective skill than the formulation of new values in a changing society. For example, in the Dominican Republic the younger, post-Trujillo generation in rural areas is rapidly changing its perceptions and this is creating considerable tensions in the family. The role of women is changing and this is sometimes another source of tension. Thus, the program, in this case, deals with the values of social integration in the family within a general context of social change.

A second example is the conflict that is rising with the entry of a more commercial, capitalist-based economy into pre-capitalist rural areas with increasing exploitation of rural, lower-status groups. The program acts as a type of public advocate and as a stimulus toward rural organization to defend interests. The program also attempts to give value to often traditional peasant institutions and help these to adapt to modern contexts instead of simply sweeping away everything on which peasant personality integration has been based. The program also introduces many modern practices, but attempts to integrate or help peasants to integrate these into existing institutions. Thus the program offers a general discussion of moderinization and values in a period which is often confusing for youth and adults and seeks to assist them in this transition from peasants to farmers.

The format of the University for All is that of the six general learning experiences but modified to fit the objectives of broader discussion of human values.

1. The Radio Broadcast

The more typical format of the University for All is that of the afternoon, one-hour broadcast from 1:00 to 2:00 P.M.[1] This period features the directors of the progam, "Pedro" Gonzalez and "Mechy"(Mercedes) Delgado, and, over a period of several years "Pedro and Mechy" have become household terms in the northcentral region of the Dominican Republic. The program maintains a general tone of humor, the mistique of "the one big family of the University for All," a thematic unity in each program and in the overall programming, and a constant variety of presentation: radiodramas, commentary, reading letters, speeches of public personages, dialogue of the directors, interviews, round table discussions, songs, poetry written by listeners or well-known Dominicans, historical episodes, etc.

Since this is the hour of the soap opera, radio novel in Latin America, and, more important, the program treats of human relations and deeper value themes, the serial radiodrama is the most frequent medium, each with its well-known central character who wins the hearts of the listeners. In one series of sixty episodes the major character is Dr. Paulino, a rural family doctor who, in a dialogue with people of the community, plays the role of doctor, priest, and schoolteacher on topics of family relations, sexual maturity, health, the community, adolescence, etc. In another series of 300 episodes of eight minues, Mi Tio Juan (My Uncle John) an elderly bacholer, telegraph operator on a ship, discusses a series of typical human, religious and social problems. Other serials are the now famous Jurado No. 13, El Padre Vicente, El Niño y Usted (You and Your Child) discussing child care, Cuide de su salud (Taking Care of Your Health), Reina del Hogar (Queen of the Home), Ecos de la Juventud (Echoes from the Youth) reporting activities of the many youth clubs, and other more occasional programs. After each of these programs "Pedro and Mechy" engage in a series of discussions of the meaning of the drama and often discuss letters written in by listeners on the particular series.

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[1] The University for All also includes a late afternoon period of one hour which presents a children's program; the program of the farmer's pressure-group organization; a program on farming methods, and the Asamblea Cristiana.

One of the most important aspects of the program is its role in public advocacy. Listeners are now accustomed, when there is an experience of fraud by local merchants or exploitation by a factory or large landhowner, to bring the case to the radio station. Usually, a careful study of the case is made, and all of the principle people involved are interviewed. Frequently, revelations of fraud or injustices and the discussion of the case continue over a period of weeks and all details of the problem are brought out. On the basis of its public advocacy role Radio Santa Maria has established its reputation in the Dominican Republic as the "Voice of the Campesino" and as "always speaking the truth."

In addition to the serial programs, the University for All regularly presents a section on popular science; the familiar recipes and artesanry projects for women, the discussions of the activities of women's organizations, history, and letters.

2. Printed Materials

The use of printed materials is secondary in this program, but each year there are two "campaigns" which, over a period of six months, concentrate on the adoption in the home, the farm, or the community a particular modern practice or institution. This centers upon a printed pamphlet which is distributed for US$ .05. One of the most successful of these has been the "compaign for clean drinking water" (Compaña de Agua Pura).

The steps in this campaign are the following:

a) A series of programs which explain the scientific, social and personal importance of the practice, for example, of pure water, along with short announcements and handbills summarizing the central idea.

b) Launching the pamphlet which is attractively but economically printed with radio announcements, a series of programs explaining in detail, for example, the different ways of purifying water.

c) Follow up with visits to communities with particular success in the campaign, interviews with individuals involved, etc.

One index of the success of the "Campaign for Pure Drinking Water," is the distribution of more than 15,000 copies of the pamphlet in the campaign and another 15,000 copies through other agencies collaborating in the campaign.

3. Personal Study Guidance and Group Discussion

The personal study guidance in the field is not a part of this program except in the reading of three to five selected letters in each program. However, the communitarian aspect is implemented in the "visits" of the directors, Pedro and Mechy, to rural communities. These visits are carefully structured to allow the people of the local community to engage in a round table discussion on a theme proposed by the directors or a local problem suggested by the people of the community. These discussions are taped or, in some cases, broadcast directly. The objective is not only to give local people the experience of discussion of a theme on deeper human and social values but to allow the people in rural communities to express their opinions..

This attempt to incorporate local communities in the programming is an important dimension of Radio Santa Maria and could almost be considered a seventh type of learning experience.

4. Collaboration With Local Organizations

The specific aspects of the program are directed to current activities of homemaker's clubs, youth clubs, farmer's associations, and, at present, the program is one of the most important educational media for these rural organizations. In the visits to communities, the organizational activities are a central theme of the discussions.

APPENDIX IV

THE INFLUENCE OF LONGER ENROLLMENT IN RADIOPHONIC SCHOOLS ON LEVELS OF ACADEMIC ACHIEVEMENT

In Chapter VI, it was proposed, as a corollary to the hypothesis that radiophonic students have higher levels of academic achievement than students in schools with conventional methods, that the longer the period of enrollment the higher the level of achievement. That is, it is argued that if students are exposed to a better method over a period of time, they receive a progressively better scholastic foundation so that the effect of the method is cumulative. On the other hand, some observations indicate that when a student first enters the radiophonic schools he or she experiences a period of adjustment to the method, and levels of academic achievement tend to be lower at the outset.

To test the proposition that there is a positive relationship between the length of time of enrollment and level of achievement, the item on the questionnaire filled out by the radiophonic students indicating number of courses completed in this system was correlated with the score on the examination, using the Pearson correlation method. It should be noted that the correlation of "number of courses" was not directly with the raw examination score, but with the number associated with

Table IV.1 : Zero-Order Correlations Between Number of Courses Enrolled in Radiophonic Schools and Scores on Certificate Examinations[1]

	Sixth Grade		Eighth Grade	
Subjects	District I	District II	District I	District II
	No. 111	No. 201	No. 49	No. 103
Spanish Language	-.122	-.228***	-.072	.023
Spanish Grammar	-.065	-.044	.348**	.097
Mathematics	.006	-.079	.206	.034
Natural Sciences	.020	-.041	.271*	.030
Dominican Economy	.140	-.033		
English			-.042	-.014
Social Studies	.111	-.045	.337**	.259**

* p = .05; ** p = .01; *** p = .001

[1] Scores at coded intervals.

the coding intervals: (1) less than 50; (2) 50 to 59; (3) 60 to 69; (4) 70 to 79; (5) 80 to 89; and (6) 90 and above. However, raw scores were not available and the best indicator of raw score is the set of numbers ranging from one to six.[1] In this form, the number of courses enrolled was correlated with the examination scores in each of the six subjects. These Pearson correlations are presented in Table IV, 1. by grade and District.

At the sixth grade level in District I, there are no significant correlations with any of the subject matters. Only in the case of Dominican economy and social studies is there a small positive correlation of .140 and .111 respectively.

At the sixth grade level in District II there is virtually no correlation of number of courses and higher examination scores in any of the subjects except in the case of Spanish language where the correlation is negative, that is higher examination scores are associated with a shorter period of enrollment.

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[1] The Pearson correlation technique has the advantage of expressing in a single coefficient ranging between - 1 and +1 the relationship, negative or positive, between two variables. If, in a sample of students, higher examination scores are consistently associated with longer periods of enrollment, the coefficient would be closer to + 1, in the area of .35 to .75. On the other hand if students, who have recently enrolled have high grades and students with longer periods of enrollment have lower grades, the relationship would tend toward -1. A coefficient of from -.05 to +.05 indicates that there is virtually no relationship: some recent students have low grades and some do not, etc.

A caution in interpretating this data in which there are different size groups is that larger samples tend toward smaller coefficients statistically.

At the eighth grade level in District I, there are relatively significant correlations of number of courses; with Spanish grammar, .348; mathematics, .206; natural sciences, .271; and social studies, .337.

At the eighth grade level in District II, there are no significant relationships between number of courses and higher examination scores except in social studies.

Several patterns appear in these data. First, the stronger positive relationships are consistently occurring in District I. Second, the relationships at the sixth grade level shift lower in comparison with the eighth grade: where there are stronger positive relationships at the eighth grade level in District I, at the sixth grade level in District I, these become weaker positive relationships; and where there are weak positive relationships at the eighth grade level in District I, these become negative relationships at the sixth grade level. Third, the only consistent positive relationship, _mutatis mutandi_, is in the subject of social studies; the only consistently low or rather strongly negative relationship is with Spanish language (reading).

From these rather consistent patterns, it is possible to several significant conclusions. First, it is logical to suppose that those at the sixth grade level have generally been enrolled a shorter period of time since so many are entering the radiophonic schools at the fifth grade level. This would explain why there is little or no relationship. They have been in the radiophonic schools a short time and there really has not been a chance to establish a trend. However, students at the eighth grade level would tend to be enrolled longer and would have been exposed to a greater cumulative effect of the radiophonic methods

A much clearer interpretation may be placed on the discrepancy between Districts I and II in both sixth and eighth grade. The analysis of the relationship between the capacity of field teachers and levels of achievement has indicated that students in District I tend to have higher levels of achievement because they have better field teachers. The corollary to this is that where there are better field teachers a longer period of enrollment will be associated with higher levels of academic achievement. Where the field teachers are weak, as in District II, the radiophonic method tends not to have a cumulative effect. This further reinforces the other data indicating the importance of the field teacher in the system of Santa Maria.

The consistent association between longer periods of enrollment and the subject of social studies indicates that it is in this area that the radiophonic schools of Santa Maria tend to have their strongest cumulative effect. The least cumulative effect appears to be in Spanish language: radiophonic students are not reading better for having been with this method a longer period of time.

APPENDIX V

DETAILED BUDGET PROJECTION FOR THE SANTA MARIA MODEL OF RADIOPHONIC PRIMARY-INTERMEDIATE EDUCATION WITH 5,000 TO 40,000 ENROLLMENT

Appendix V : Detailed Budget Projection for the Santa Maria Model of Radiophonic Primary-Intermediate Education With 5,000 to 40,000 Enrollment

Budget Item: Personnel		Enrollment Projection 5,000
1. Central Administration		
General Director	(800 x 13)*	$US 10,400
Subdirector	(600 x 13)*	7,800
Exec. Secretary	(300 x 13)	3,900
Accountant	(300 x 13)	5,200
Office Assistant	(200 x 13)	2,600
TOTAL:		$US 29,900
2. Teaching Staff		
Director	(500 x 13)	$US 6,500
Six teachers	(400 x 13 x 6)	31,200
Two artists	(300 x 13 x 2)	7,800
Studio Technician	(300 x 13)	3,900
TOTAL		$US 49,400

* Includes transportation

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Appendix V : Detailed Budget Projection for the Santa Maria Model of Radiophonic Primary-Intermediate Education With 5,000 to 40,000 Enrollment

		Enrollment Projection		
Budget Item: Personnel		10,000	20,000	40,000
1. Central Administration				
General Director	(800 x 13)*	$US 10,400	$US 10,400	$US 10,400
Subdirector	(600 x 13)*	7,800	7,800	7,800
Exec. Secretary	(300 x 13)	3,900	3,900	3,900
Accountant	(300 x 13)	5,200	5,200	5,200
Office Assistant	(200 x 13)	2,600	2,600	2,600
TOTAL:		$US 29,900	$US 29,900	$US 29,000
2. Teaching Staff				
Director	(500 x 13)	$US 6,500	$US 6,500	$US 6,500
Six teachers	(400 x 13 x 6)	31,200	31,200	31,200
Two artists	(300 x 13 x 2)	7,800	7,800	7,800
Studio Technician	(300 x 13)	3,900	3,900	3,900
TOTAL		$US 49,400	$US 49,400	$US 49,400

* Includes transportation

Appendix V : Detailed Budget Projection for the Santa Maria Model of Radiophonic Primary-Intermediate Education With 5,000 to 40,000 Enrollment

		Enrollment Projection	
Budget Item: Personnel		5,000	
3. Central Records Department			
Director	(400 x 13)	US$	5,200
Secretary	(300 x 13)		
Secretary	(200 x 13)		2,600
Secretary	(200 x 13)		
Secretary	(200 x 13)		
Secretary	(200 x 13)		
Secretary	(200 x 13		
Secretary	(200 x 13)		
TOTAL:		US$	7,800
4. Printing and Distribution			
Printer	(400 x 13)	US$	5,200
Distributor	(200 x 13)		2,600
Distributor	(200 x 13)		[illegible]
Assistant	(150 x 13)		1,950
Assistant	(150 x 13)		
Two assistants	(300 x 13)		
TOTAL		US$	9,750

		Enrollment Projection		
Budget Item: Personnel		10,000	20,000	40,000
3. Central Records Department				
Director	(400 x 13)	US$ 5,200	US$ 5,200	US$ 5,200
Secretary	(300 x 13)	3,900	3,900	3,900
Secretary	(200 x 13)	2,600	2,600	2,600
Secretary	(200 x 13)		2,600	2,600
Secretary	(200 x 13)		2,600	2,600
Secretary	(200 x 13)			2,600
Secretary	(200 x 13			2,600
Secretary	(200 x 13)			2,600
TOTAL:		US$ 12,700	US$ 16,900	US$ 24,700
4. Printing and Distribution				
Printer	(400 x 13)	US$ 5,200	US$ 5,200	US$ 5,200
Distributor	(200 x 13)	2,600	2,600	2,600
Distributor	(200 x 13)		2,600	2,600
Assistant	(150 x 13)	1,950	1,950	1,950
Assistant	(150 x 13)	1,950	1,950	1,950
Two assistants	(300 x 13)			3,900
TOTAL		US$ 11,700	US$ 14,300	US$ 17,200

Appendix V : Detailed Budget Projection for the Santa Maria Model of Radiophonic Primary-Intermediate Education With 5,000 to 40,000 Enrollment

			Enrollment Projection
Budget Item: Personnel			5,000
5. Field Supervision			
A. Central Office (15,000 Students)			
Supervisor	(600 x 13)*	US$	7,800
Supervisor	(500 x 13)*		6,500
Supervisor	(500 x 13)*		
Supervisor	(400 x 13)*		
Supervisor	(400 x 13)*		
	TOTAL	US$	14,300
B. Major Regional Office (10,000 Students)			
Supervisor	(600 x 13)*		
Supervisor	(500 x 13)*		
Supervisor	(500 x 13)*		
Secretary	(350 x 13)		
Secretary	(250 x 13)		
Secretary	(250 x 13)		
	TOTAL		

* Includes transportation

Appendix V : Detailed Budget Projection for the Santa Maria Model of Radiophoni Primary-Intermediate Education With 5,000 to 40,000 Enrollment

Budget Item: Personnel		Enrollment Projection		
		10,000	20,000	40,000
5. Field Supervision				
A. Central Office (15,000 Students)				
Supervisor	(600 x 13)*	US$ 7,800	US$ 7,800	US$ 7,800
Supervisor	(500 x 13)*	6,500	6,500	6,500
Supervisor	(500 x 13)*	6,500	6,500	6,500
Supervisor	(400 x 13)*		5,200	5,200
Supervisor	(400 x 13)*			5,200
	TOTAL	US$ 20,800	US$ 26,000	US$ 31,200
B. Major Regional Office (10,000 Students)				
Supervisor	(600 x 13)*		US$ 7,800	US$ 7,800
Supervisor	(500 x 13)*		6,500	6,500
Supervisor	(500 x 13)*			6,500
Secretary	(350 x 13)		4,500	4,500
Secretary	(250 x 13)			3,250
Secretary	(250 x 13)			3,250
	TOTAL		US$ 18,800	US$ 33,750

* Includes transportation

Appendix V : Detailed Budget Projection for the Santa Maria Model of Radiophonic Primary-Intermediate Education With 5,000 to 40,000 Enrollment

	Enrollment Projection	
Budget Item: Personnel	5,000	10,000
5. Field Supervison		
C. Minor Regional Office (7,500 Students)		
Supervisor (500 x 13)*		
Supervisor (400 x 13)*		
Supervisor (400 x 13)*		
Secretary (250 x 13)		
TOTAL		
D. Minor Regional Office (7,500 Students)		
Supervisor (500 x 13)*		
Supervisor (400 x 13)*		
Supervisor (400 x 13)*		
Secretary (250 x 13)		
TOTAL		
Total: Supervision	US$ 14,300	US$ 20,800

* Includes transportation

Appendix V : Detailed Budget Projection for the Santa Maria Model of Radiophonic Primary-Intermediate Education With 5,000 to 40,000 Enrollment

Budget Item: Personnel		Enrollment Projection	
		20,000	40,000
5. Field Supervison			
C. Minor Regional Office (7,500 Students)			
Supervisor	(500 x 13)*	US$ 6,500	US$ 6,500
Supervisor	(400 x 13)*		5,200
Supervisor	(400 x 13)*		5,200
Secretary	(250 x 13)	3,250	3,250
	TOTAL	US$ 9,750	US$ 20,150
D. Minor Regional Office (7,500 Students)			
Supervisor	(500 x 13)*		US$ 6,500
Supervisor	(400 x 13)*		5,200
Supervisor	(400 x 13)*		5,200
Secretary	(250 x 13)		3,250
	TOTAL		US$ 20,150
Total: Supervision		US$ 64,300	US$ 105,250

* Includes transportation

Appendix V : Detailed Budget Projection for the Santa Maria Model of Radiophonic Primary-Intermediate Education With 5,000 to 40,000 Enrollment

	Enrollment Projection
Budget Item: Supplies, Services	5,000
6. Printing Supplies	
Paper	US$ 10,000
Offset plates, chemicals, etc.	8,000
TOTAL	US$ 18,000
7. Preparation of Masters	
Reference books, ink photographs, etc.	US$ 4,800
8. Broadcasting	
Multiple recording (1,000 x 12)	US$ 12,000
Recording tape (100 x 12)	1,200
Transmission	
Central station (2,000 x 12)	24,000
Second station (1,000 x 12)	
Third station (1,000 x 12)	
Fourth station (2,000 x 12)	
TOTAL	US$ 37,200

Appendix V : Detailed Budget Projection for the Santa Maria Model of Radiophonic Primary-Intermediate Education With 5,000 to 40,000 Enrollment

	Enrollment Projection		
Budget Item: Supplies, Services	10,000	20,000	40,000
6. Printing Supplies			
Paper	US$ 20,000	US$ 40,000	US$ 80,000
Offset plates, chemicals, etc.	10,000	14,000	22,000
TOTAL	US$ 30,000	US$ 54,000	US$ 102,000
7. Preparation of Masters			
Reference books, ink photographs, etc.	US$ 4,800	US$ 4,800	US$ 4,800
8. Broadcasting			
Multiple recording (1,000 x 12)	US$ 12,000	US$ 12,000	US$ 12,000
Recording tape (100 x 12)	1,200	1,200	1,200
Transmission			
Central station (2,000 x 12)	24,000	24,000	24,000
Second station (1,000 x 12)		12,000	12,000
Third station (1,000 x 12)			12,000
Fourth station (2,000 x 12)			24,000
TOTAL	US$ 37,200	US$ 50,400	US$ 88,000

Appendix V : Detailed Budget Projection for the Santa Maria Model of Radiophonic Primary-Intermediate Education With 5,000 to 40,000 Enrollment

Budget Item: Supplies, Services		Enrollment Projection 5,000
9. Office Supplies		
Offices of Director Subdirector and Central Records		US$ 600
10. Depreciation		
Vehicles, office equipment, recording equipment		US$ 4,800
11. Building and Utilities		
Building, lights telephone	(500 x 12)	US$ 6,000
12. Public Relations		
Publicity, promotion, prizes, reception	(500 x 12)	US$ 9,000
13. Contingency Fund		US$ 3,000
	Grand TOTAL:	US$ 194,550

Appendix V : Detailed Budget Projection for the Santa Maria Model of Radiophonic Primary-Intermediate Education With 5,000 to 40,000 Enrollment

	Enrollment Projection		
Budget Item: Supplies, Services	10,000	20,000	40,000
9. Office Supplies			
Offices of Director Subdirector and Central Records	US$ 600	US$ 600	US$ 600
10. Depreciation			
Vehicles, office equipment, recording equipment	US$ 6,000	US$ 7,500	US$ 12,500
11. Building and Utilities			
Building, lights telephone (500 x 12)	US$ 6,000	US$ 8,400	US$ 13,200
12. Public Relations			
Publicity, promotion, prizes, reception(500 x 12)	US$ 17,000	US$ 25,000	US$ 38,000
13. Contingency Fund	US$ 6,000	US$ 9,000	US$ 12,000
Grand TOTAL:	US$ 232,400	US$ 335,100	US$ 499,250

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APPENDIX VI

SIXTH AND EIGHTH GRADE CERTIFICATE EXAMINATIONS PREPARED BY NATIONAL OFFICE OF ADULT EDUCATION AND USED AS THE TEST INSTRUMENT IN THE EVALUATION

SIXTH AND EIGHTH GRADE CERTIFICATE EXAMINATIONS PREPARED RADIOPHONIC SCHOOLS OF SANTA MARIA IN JULY 1975

INTRODUCTORY NOTE

The test instruments used in the comparison of levels of academic achievement of sixth and eighth grade students in the radiophonic and conventional classroom methods were prepared by the district offices of the National Office of Adult Education of the Secretariat of Education. These examinations are presented here in the original Spanish, reproducing the form in which they were distributed to the students except for the omission of occasional drawings. Since the sample included two districts of the National Office of Adult Education, there are four test instruments: sixth grade in District I, eighth grade in District I, sixth grade in District II, and eighth grade in District II.

As has been indicated in the text above, to establish a greater parity in the test instrument for the two groups of students, questions on material not covered by the radiophonic schools were omitted in the calculation of the grade scores. The questions or parts of questions which were not taken into consideration in the scoring are indicated by an asterisk (*). The total reduction of percentage points by the elimination of some questions is indicated at the top of the page in the right hand corner of the first sheet of each subject matter. Since all of the examinations were arranged so that a total of 100 grade points were possible in each of the six major subject matters, the removal of some questions reduces the total possible score from 100 to some fraction of 100. For example, the notation " $\frac{x}{90}$ " indicates that the questions totaling 10 percentage points were removed and that the final grade was calculated by the actual grade of the individual student divided by 90.

Following the official certificate examinations used by the Secretariat of Education are the approved sixth and eighth grade examinations used by the Radiophonic Schools of Santa Maria. These offer a basis of comparison of the two different sets of examinations.

(Sixth Grade)
(District I)

República Dominicana
SECRETARIA DE ESTADO DE EDUCACION, BELLAS ARTES Y CULTOS

Dirección General de Educación de Adultos.

PRUEBAS GENERALES DE TERMINO DE LA EDUCACION PRIMARIA PARA ADULTOS. AÑO LECTIVO 1974-1975.

3er. NIVEL

LENGUA ESPAÑOLA — LECTURA COMPRENSIVA

Un pescador que sabía tocar la flauta se fue a orillas del mar, llevando consigo la caña y la flauta. Entonces, habiéndose sentado en una punta de roca que se adelantaba hacia el mar, empezó a tocar su instrumento, pensando que los peces que lo oirían, encantados por la música, saldrían del mar en seguida. Pero el pescador tocaba su flauta en vano, hasta que cansado, arrojó su flauta, la cual desapareció en las olas, y armando su caña echó al mar el cebo, que atrajo innumerables peces.

Los fue sacando de su anzuelo en el que habían quedado prendidos, y viéndolos saltar en la orilla decía: "Animales perversos, cuando yo tocaba la flauta no danzábais; danzais cuando ya no la toco".

La fábula se dirige a los que todo lo hacen en tiempo inoportuno.

República Dominicana
SECRETARIA DE ESTADO DE EDUCACION, BELLAS ARTES Y CULTOS
Dirección General de Educación de Adultos.

X
90

PRUEBAS GENERALES DE TERMINO DE LA EDUCACION PRIMARIA PARA ADULTOS. AÑO LECTIVO 1974-1975.

3er. NIVEL

LENGUA ESPAÑOLA **LECTURA COMPRENSIVA**

Alumno ______________________________

Escuela ______________________ Lugar ______________________

Maestro ______________________ Fecha ______________________

C U E S T I O N A R I O

*1. ¿Cuál es el título de la lección? ______________________

2. ¿A dónde se fué el pescador? ______________________

3. ¿Qué llevaba consigo el pescador? ______________________

4. ¿Dónde se sentó el pescador? ______________________

5. ¿Para qué tocaba el pescador su flauta? ______________________
____

6. ¿Consiguió el pescador algo al tocar su flauta? ______________________

7. ¿Qué hizo el pescador con la flauta? ______________________
____

8. ¿Cómo pudo el pescador atraer a los peces? ______________________
____

9. ¿Dónde quedaron prendidos los peces? ______________________
____

10. ¿Qué decía el pescador cuando los peces saltaban? ______________________
____

VALORACION: CADA TEMA VALE 10 PUNTOS.

X
90

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Dirección General de Educación de Adultos.

PRUEBAS GENERALES DE TERMINO DE LA EDUCACION PRIMARIA PARA ADULTOS. AÑO LECTIVO 1974/75.

3ª CURSO

LENGUA ESPAÑOLA

Nombre del alumno ______________________________

Escuela ____________________ Lugar ____________

Maestro ____________________ Fecha ____________

I.- En las siguientes oraciones encierra en un círculo los sujetos y subraya los predicados.

a) Cristóbal Colón fué el descubridor de América.
b) Luperón fué un valiente soldado de la Restauración.
c) Iba delante la Pinta.
d) Juan recoge su cosecha de maní.
e) Están fragantes las flores del jardín.

II.- ESCRIBE cinco oraciones:

a) NEGATIVA ______________________________
b) AFIRMATIVA ______________________________
c) INTERROGATIVA ______________________________
d) ADMIRATIVA ______________________________
e) IMPERATIVA ______________________________

III.- Escribe a continuación lo que se te pide:

a) Dos verbos ______________ y ______________
b) Dos palabras primitivas: ______________ y ______________
c) Sos derivados: ______________ y ______________

V.- En las siguientes oraciones indica con una X los sustantivos, con un circulo los verbos y subraya los complementos:

Los campos están feos por la sequía.
El cibao es muy fértil.
Perdí una pluma de oro.

V.- A continuación tenemos un nombre de cada uno de estos grupos: propio, abstracto, compuesto, diminutivo y colectivo, indica al lado de cada uno el grupo a que pertenece:

Ejército ______________________, cortaplumas ______________________

Santiago ______________________, animalito ______________________,

bondad ______________________

VI.- AGREGA un complemento a cada una de las siguientes oraciones:

a) Mi padre compró un sombrero ______________________

b) El campesino ordeña la vaca ______________________

c) Recibiré a mis amigos ______________________

d) Los alumnos estudian ______________________

e) Los patriotas derrotaron a los haitianos ____________

*VII.- ESCRIBE las siguientes palabras en orden alfabético:

-10 Kiosko, ferrocarril, zapatero, aguacate, queso, comedor, uvero, habichuelas, chocolate, iglesia.

VIII.- a) SUBRAYA las preposiciones en estas oraciones:

María trabaja con agrado.

Vino caminando desde la finca.

b) ESCRIBE un adverbio ______________________

un adjetivo ______________________

un verbo ______________________

IX.- COMPLETA las siguientes expresiones:

La raíz o radical del verbo amar es ______________________

La terminación o desinencia de temer es ________________

Las palabras yo, tú, él son __________________ y se escriben delante del ______________________

Las expresiones estudiaron, leí, comísteis, amé y partió, corresponden al tiempo ______________________

X.- En esta composición pon los acentos ortográficos que faltan

"El periodico llega tarde a Restauracion por la falta de via de comunicacion rapida a esa apartada región noroestana, donde los vehiculos pasan por calidas tierras rodeadas de cambrones , pero tambien por varias plantaciones agricolas que representan una gran riqueza para el país".

DEL PUNTO VIII EL A VALE 4 PUNTOS Y EL B VALE 6 PUNTOS.

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Dirección General de Educación de Adultos
PRUEBAS GENERALES DE TERMINO DE LA EDUCACION PRIMARIA PARA ADULTOS. AÑO LECTIVO 1974/75.

$\frac{X}{74}$

3ª CURSO

MATEMATICAS

Nombre del alumno ______________________________
Escuela ____________________ Lugar ______________
Maestro ____________________ Fecha ______________

I.- RESUELVA las siguientes operaciones:

*a) 745 - 20 - 1025 - 8 =

- 2 b) 4805 - 896 =

c) 169 X 87 =

d) 2619 - 18 =

e) 92 X 100 =

*II.- EJECUTE las operaciones siguientes suprimiendo los factores comunes:

-10 a) $\frac{7 \times 6 \times 10}{14 \times 3 \times 5} =$ b) $\frac{13 \times 9 \times 4}{2 \times 9 \times 3} =$

c) $\frac{8 \times 4 \times 4 \times 11 \times 9}{11 \times 3 \times 9 \times 8 \times 4} =$ d) $\frac{16 \times 5 \times 6}{10 \times 8 \times 2} =$

e) $\frac{20 \times 300 \times 10}{100 \times 10 \times 2} =$

III.- a) De estas figuras la primera divídela en tercios y la segunda en cuart

b) REDUZCA a quebrados los siguientes porcientos:

50% = 25% = 60% =

IV.- a) DIGA lo que representa la parte sombreada, de las siguientes figuras:

b) REDUZCA a quebrados los siguientes decimales:

0.7 = 0.75 = 0.80 =

V.- *a) 3 a. hacen _____ libras c) 120 q. hacen ________ toneladas

b) $2.25 hacen _____ centvs. d) 30 metros hacen ____ decímetros

e) 2 kg. hacen ______ gramos.

VI.- En una escuela hay 1200 alumnos inscritos, si de ellos son 900 varones, cuántas hay hembras y que por ciento representan los varones?

OPERACIONES:

RESPUESTAS: _____________

____

VII.- a) Si 4 cerdos de 3 qq. cada uno cuestan $654.00 cuántos costaron 7 cerdos de igual peso y al mismo precio?

OPERACIONES:

RESPUESTAS: _____________

____

VIII.- a) Si a un ángulo recto se le saca un ángulo de 33 grados, de cuántos grados fué el otro?

RESPUESTA: _____________

b) DIBUJE un ángulo recto, divídalo en dos iguales y diga cuánto mide cada uno.

RESPUESTA: _____________

*IX.- DE contestación en la siguiente figura a lo que se le indica más abajo:

a) Escriba el nombre de la figura _____________

-10 b) Trácele una diagonal.

c) ¿Cómo se llaman los ángulos A y D? _______________

d) Si el ángulo A mide 75 grados, cuánto mide el ángulo B ? ________

e) ¿Cómo se llama el ángulo d? ___________________

X.- BUSQUE el área a las siguientes figuras geométricas:

EN LOS TEMAS III, IV, VIII, EL (a) VALE 4 y EL (b) 6 PUNTOS. CADA TEMA CORRECTO VALE 10 PUNTOS.

X/46

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3ª CURSO

ESTUDIOS SOCIALES

Nombre del alumno ______________________________

Escuela ____________________ Lugar ____________________

Maestro ____________________ Fecha ____________________

I.- El mapa de más abajo representa la América del Norte. Pon el número 1 a los Estados Unidos, el 2 al Océano Pacífico, 3 al Estado de Alaska, 4 al Canadá y el 5 a México.

(Map of the northern hemisphere is ommitted)

II.- A continuación te presentamos una lista de países para que escriba al lado de cada uno su capital:

CAPITAL

1) España ____________________
2) Cuba ____________________
3) Chile ____________________
4) Brasil ____________________
5) Venezuela ____________________

*III.- Al lado de cada cordillera escribe el lugar donde está ubicada.

Rocosa ________________ Sierra de Mérida ____________________
Los Andes ____________________ Los Apalaches ________________
Sierra del Matto Grosso ____________________

*IV.- De las oraciones que aparecen a continuación, una son verdaderas y otras son falsas. Escribe una V a las verdaderas y una F a las falsas.

____ El pico Aconcagua está en el continente africano.

____ El desierto de Sahara se encuentra en Africa.

____ El océano Pacífico ee el más pequeño del mundo.

____ El primer país pequeño de América es el Perú.

____ La Luna es el satélite de la tierra.

*VI.- Al lado de los siguientes países, escribe el nombre de su río principal.

Estados Unidos ____________________ Rep. Dom. ____________

Venezuela ____________________ Argentina ____________

Brasil ____________________

VII.- De las palabras encerradas entre paréntesis, subraya la que complete mejor el sentido de la oración.

a) La proclamación de los derechos del hombre se inició con la revolución (española, americana, francesa).

b) El descubrimiento de América fué posible con la ayuda de (Italia, Francia, España).

c) El pueblo de la antiguedad que más desarrolló en las ciencias y las artes fué (Egipto, Atenas, Esparta).

d) Simón Bolívar fue el libertador de (Chile, Argentina, Venezuela).

*e) El navegante portugués que emprendió el viaje alrededor del mundo fue (Magallanes, Colón, Américo Vespucio).

VIII.- En la columna de la izquierda figuran algunos personajes históricos. En la columna de la derecha aparecen los hechos en que se distinguieron. Al lado de cada hecho pon el número del personaje correspondiente.

1. George Washington	____	Fué héroe de la batalla de "El número".
2. Gregorio Luperón	____	Escribió el Himno Nacional de la Rep. Dom.
3. Emilio Prud'Homme	____	Héroe de la Restauración de la Rep. Dom.
4. Antonio Duvergé	____	Murió fusilado en San Juan de la Maguana.
5. Francisco del Rosario Sánchez	____	Fué el primer presidente de los Estados Unidos de Norte América.

*IX.- ORDENA los siguientes hechos históricos en el orden en que fueron sucediendo.

a) Independencia Nacional 1) ____________________

b) 1ra. intervención Americana en nuestro país. 2) ____________________

c) Fundación de la Sociedad Secreta "La trinitaria" 3) ______________________

d) Invación de Boyer 4) ______________________

e) Caida del Trujillato 5) ______________________

X.- EXPLICA brevemente las siguientes cuestiones:

a) Los principales Derechos del hombre:

____

____

____

____

b) Funciones del Poder Legislativo

____

____

____

____

____

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PRUEBAS GENERALES DE TERMINO DE LA EDUCACION PRIMARIA PARA ADULTOS. AÑO LECTIVO 1974/75.

3ª CURSO

CIENCIAS NATURALES

Nombre del alumno ______________________________
Escuela ____________________ Lugar ____________________
Maestro ____________________ Fecha ____________________

I.- DA contestación a las siguientes oraciones:

a) ¿Qué es necesario hacer cuando estamos cansado después de realizar un trabajo? ______________________

*b) ¿Cómo se llama la sustancia nociva que contiene el tabaco? __________

c) ¿Por qué las bebidas alcohólicas son un terrible peligro para la salud?
____

d) ¿Qué enfermedad nos puede transmitir la picada del mosquito anofeles?
____

e) ¿Cuáles sustancias debemos ingerir para conservar nuestra salud?
____

II.- En la columna de la derecha hay varios conceptos, escribe en la raya de la izquierda el número que según lo que se pide a continuación:

1) Esqueleto	____ Huesos del cuerpo que tienen la forma de arco.
2) Clavícula	____ Es un hueso de la pierna.
3) Falange	____ Conjunto de huesos que forman nuestro organismo.
4) Costillas	____ Está formado por un sólo hueso, que es el más largo del cuerpo humano.
5) Muslo	____ Huececillos que componen los dedos.

*III.- El dibujo representa un pez, escribe sobre las flechas el nombre de las aletas correspondientes:

(A crude drawing of a fish has been omitted)

IV.- A continuación aparecen algunas preguntas acerca del agua, contéstalas en la raya que está a la derecha:

a) ¿Cuáles elementos la forman? ______________________________

b) ¿En qué estado se encuentra en la naturaleza? ______________ ______________________________

c) ¿A cuántos grados hierve? ______________

d) ¿Por qué es incolora? ______________________________

e) ¿A los cuántos grados se solidifica? ______________________

V.- En la columna de la izquierda hay varios nombres de animales y a la derecha algunas definiciones propias de ellos, ponle el número de cada definición al animal correspondiente, según tú creas.

____ mosquito
____ abeja
____ mariposa
*____ caballo
____ oveja

1. Produce leche, carne y lana
2. Transporta el polen de un lugar a otro.
3. Produce el paludismo.
4. Transmite enfermedades y perjudica la agricultura.
5. Su principal producto es alimenticio y medicinal.

VI.- A continuación aparecen varias preguntas. Escribe en la raya de la derecha, una V si la considera verdadera, y una F, si la considera falsa.

a) Es función del aparato respiratorio llevar oxígeno a la sangre? ____

b) Los pulmones son órganos fundamentales para la respiración de los humanos? ____

c) El trasnocharnos nos hace más intelectuales? ____

d) Por medio del tacto podemos percibir los olores? ____

e) La bacteria está formada por muchas células? ____

VII.- EL dibujo de más abajo representa el corte longitudinal de una flor. Escribe en cada una de las flechas el nombre de las partes señaladas.

(A drawing of a flower has been omitted.)

VIII.- ESCRIBE todo lo que sepas sobre los siguientes conceptos:

a) Pararrayo: ______________________________
____

b) Palanca ____

____

IX.- Las oraciones de más abajo están incompletas. Subraya en cada caso una de las palabras que están en la columna de la derecha que complete el significado de cada oración:

(plátano
a) Es una planta textil .... (café
(algodón

(molécula
b) Es la porción más pequeña de una sustancia....... (átomo
(elemento

(oxígeno
c) Es un mineral compuesto........................... (carbono
(mármol

(plano inclinado
d) Es una máquina simple............................ (automóvil
(grúa

(barómetro
e) Es un aparato que se usa para medir la temperatura de los cuerpos (termómetro
(pluviómetro

X.- A continuación aparecen dos definiciones, leélas detenidamente y escribe en la raya de la izquierda el concepto correspondiente de cada una.

____________________ Es un metal de color amarillo, blando necesita olearse para darle dureza, es el más maleable de todos los metales.

____________________ No tienen brillo, no se oxidan y son malos conductores del calor y la electricidad.

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3ª NIVEL

NOCIONES DE ECONOMIA DOMINICANA

Nombre del alumno ______________________________

Escuela ____________________ Lugar ____________________

Maestro ____________________ Fecha ____________________

I.- EXPLICA brevemente lo siguiente:

a) ¿Qué importancia tiene el mercado en el desarrollo económico? _____
____

b) ¿En qué consiste el mercado internacional? ____________
____

II.- a) CONTESTA correctamente:

1) ¿Qué producto de nuestro país tienen mercado en el exterior? _____
____

*2) ¿En qué consiste el mercado negro? ____________
____

b) DEFINE estos conceptos:

1) Importación ______________________________

2) Exportación ______________________________

III.- En la columna de la izquierda aparecen varias definiciones de algunas de esas palabras.
COLOCA al lado de cada definición el número de la palabra definida.

1. Cooperativa	____	Sitios donde se exhiben productos de un país de una región o de varios países.
2. Exportación	____	Llevar a un país productos extranjeros.
3. Oferta	____	Asociación de personas con fines de protegerse mutuamente para lograr mejores condiciones de vida
4. Importación	____	Acto por el cual se ofrece en venta al consumidor los productos cosechados.
5. Reforma Agraria 6. Feria	____	Es una serie de medidas que toma el Gobierno para que los agricultores tengan tierras donde trabajar y cuenten con servicios de agua, luz, salud pública, educación, etc.

IV.- De las palabras encerradas entre paréntesis subraya la que tu consideres complete mejor el sentido de cada oración:

1) La Rep. Dom. mantiene mayor intensidad de mercado con (Puerto Rico, Europa, Estados Unidos).

2) La mina de sal más importante del país se encuentra en (Barahona, Santiago, Montecristi).

3) El banco que ofrece préstamos a los agricultores para sus siembras es el (de Reservas, Agrícola, el Hipotecario).

4) El organismo encargado directamente con el desarrollo de la Reforma Agraria es (el Banco Agrícola, el Instituto Agrario, el Instituto del Fomento Industrial).

5) Antiguamente el comercio se hacía cambiando un producto por otro, a éste se le llamó (oferta, demanda, trueque).

V.- CONTESTA las preguntas que se hacen a continuación:

a) ¿Con qué propósito se inventó la moneda? ________________________

____

b) ¿ Cuándo decimos que un producto tienen buena oferta? __________

____

c) ¿Cuál es la principal industria del País? ____________________

d) ¿En qué consiste la Balanza de Pago? ______________________

e) ¿Cuál es la industria más importante de Bonao ______________

____

VI.- DEFINE brevemente estos conceptos:

LATIFUNDIO ____

____

MINIFUNDIO ____

____

VII.- a) El mapa de más abajo, aparece dividido en tres regiones: Norte, Sur y Este. Pon la palabra ganado a la región productora, la palabra yeso, a la región que más lo produce y la palabra tabaco en la región donde más se cultiva y marca con una X donde se encuentran las principales minas de sal y oro:

(Map has been omitted.)

VIII.- a) ESCRIBE el nombre de las dos industrias principales de la provincia donde tú vives:

1) ______________________________

2) ______________________________

b) ESCRIBE el nombre de tres países con los cuales la República Dom. mantiene intercambio comercial.

1) ______________________________

2) ______________________________

3) ______________________________

IX.- EXPLICA brevemente lo siguiente:

a) Dentro del concepto de Economía, que significa la DEMANDA?

____

____

____

____

b) Por qué razón debemos de EXPORTAR más e IMPORTAR menos?

____

____

____

____

VALORACION: EL TEMA II VALE 20 PUNTOS LOS RESTANTES VALEN 10 PUNTOS CADA UNO.

EN EL TEMA VIII EL SUB-TEMA (a) VALE 4 PUNTOS Y EL (b) VALE 6 PUNTOS.

(Eighth Grade)
(District I)

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LENGUA ESPAÑOLA | LECTURA COMPRENSIVA

"LA ABEJA HARAGANA"

Había una vez en una colmena una abeja que no quería trabajar, es decir, recorría los árboles uno por uno para tomar el jugo de las flores; pero en vez de conservarlo para convertirlo en miel, se lo tomaba del todo.

Era, pues, una abeja harabana. Por las mañanas, apenas el sol calentaba el aire, la abejita se asomaba a la puerta de la colmena, veía que hacía buen tiempo, se peinaba con las patas, como hacen las moscas, y echaba entonces a volar, muy contenta del hermoso día. Zumbaba muerta de gusto de flor en flor, entraba en la colmena, volvía a salir, y así se lo pasaba trabajando para llenar la colmena de miel, porque la miel es el alimento de las abejas recién nacidas.

Como las abejas son muy serias, comenzaron a disgustarse con el proceder de la hermana haragana. En la puerta de las colmenas hay siempre unas cuantas abejas que están de guardia para cuidar que no entren bichos en la colmena. Estas abejas suelen ser muy viejitas, con gran experiencia de la vida y tienen el lomo pelado porque han perdido todos los pelos rozando contra la puerta de la colmena.

Un día, pues, detuvieron a la abeja haragana cuando iba a entrar, diciéndole:

-Compañera: es necesario que trabajes, porque todas las abejas debemos trabajar.

Republica Dominicana

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LENGUA ESPAÑOLA LECTURA COMPRENSIVA

CUESTIONARIO

Alumno ______________________________

Escuela ______________ Lugar ______________

Maestro ______________ Fecha ______________

1. ¿Cuál es el título de la lectura que acabas de leer? ______________
2. ¿Qué hacía en su recorrido por los árboles una de las abejas de la colmena ______________
3. ¿Con qué se peinaba una de las abejas? ______________
4. ¿Qué papel desempeñaban unas cuantas abejas que siempre están en la puerta de la colmena? ______________
5. ¿Para qué tienen las abejas guardias en la entrada de su colmena? ______________
6. ¿Por qué se disgustaron las abejas con su hermana? ______________
7. ¿Qué le dijeron un día a la abeja haragana? ______________
8. ¿Cuál es el alimento de las abejas recién nacidas? ______________
9. ¿Es bueno proceder como la abeja de esta lección? ______________
10. ¿Por qué? ______________

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LENGUA ESPAÑOLA (CALIDAD Y FLUIDEZ DE LA ESCRITURA)

Sed perfectos como es perfecto mi padre, que está en los cielos.

República Dominicana

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8vo. CURSO

Nombre del alumno ____________________

Escuela ____________________ Lugar ____________________

Maestro ____________________ Fecha ____________________

I.- Da contestación a las siguientes expresiones:

*a) ¿Cuál es el predicado que está formado por un verbo predicativo? ____________________

b) ¿Cuál oración tiene un solo sujeto y un solo predicado? ____________________

c) ¿Cuál complemento lleva la preposición a o para? ____________________

d) ¿Cuáles palabra designan las personas que intervienen en la conversación? ____________________

e) ¿Cómo llamamos a las distintas variaciones que experimenta el verbo en la oración? ____________________

II.- ANALIZA la siguiente oración y escribe sobre las rayas lo que se te pide acerca de ella.

ORACION: "América fue descubierta por Colón en 1492"

Sujeto ____________________

Complemento circunstancial ____________________

Predicado ____________________

Ablativo agente ____________________

III.- De las palabras que están en paréntesis, subraya la que complete mejor el sentido de la oración:

a) El adverbio es la palabra invariable de la oración que califica o determina la significación del (verbo, complemento, conjunción).

b) Es el complemento que solo lo llevan los verbos transitivos (directo, indirecto, circunstancial).

c) Son las oraciones que llevan un verbo copulativo y un predicado nomin (copulativa, impersonal, pasiva).

d) Es la parte variable de la oración que sirve para nombrar los animales, las cosas, seres inmateriales o personales (preposición, pronombres, sustantivo).

e) Es la oración que consta de más de un sujeto y más de un predicado (coordinada, compuesta, simple).

IV.- ESCRIBE en las rayas de más abajo lo que te pedimos acerca del verbo VIVIR

INFINITIVO ________________________ Conjugación a que pertenece ______

__________ GERUNDIO ____________________ PARTICIPIO __________________

POSPRETERITO _______________________________

V.- SUBRAYA el pronombre en las siguientes oraciones:

1. La piña es para tí.
2. La madre y la hija se escriben.
3. Quién pregunta en la puerta?
4. Mañana iré contigo a casa de José.
5. Este coche es mejor que el tuyo.

VI.- LLENA los espacios en blanco:

1) El __________________ es un accidente del verbo.

2) Voz ________________ es cuando el sujeto ejecuta la acción del verbo.

*3) Es el tiempo del verbo que expresa una acción que se realizará

___________________________________ es un verbo irregular.

4) Despacio es un adverbio de ____________________________

5) La ______________________ es la palabra que expresa una emoción o se
timiento fuerte al alma.

VII.- ESCRIBE en las rayas la conjunción que encuentre en cada una de las oraciones que estan a continuación:

_________ José y Luis son hermanos.

_________ La lección es corta, pero fácil.

_________ Qué deseas, vino o cerveza.

_________ Te deseo, que trabaje en la escuela.

_________ Debes acudir cuando te llaman.

VIII.- EXPLICA los siguientes conceptos:

a) Adjetivo ____

____

IX.- ESCRIBE las oraciones que te pedimos más abajo:

Transitiva ____

Reflexiva ____

Recíproca ____

Impersonal ____

Yuxtapuesta ____

X.- A continuación, a la derecha están los nombres de algunos intelectuales de nuestro país y a la izquierda la labor en que se distinguieron. ESCRIBE en cada paréntesis el número correspondiente.

1. Pedro Henríquez Ureña
2. Eugenio Deschamps
3. Salomé Ureña de Henríquez
4. Fernando Arturo de Meriño
5. Manuel de Jesús Galvan

*6. José Joaquín Pérez

(_____) Periodista

(_____) Historiador

(_____) Orador

(_____) Crítico

(_____) Poeta

$\frac{X}{74}$

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8ª CURSO

MATEMATICAS

Nombre del alumno ____

Escuela ______________________________ Lugar ____________________

Maestro ______________________________ Fecha ____________________

I.- RESUELVE las siguientes operaciones:

$14.75 + 1050.052 + 4.1 =$

$945.63 - 89.784 =$

$109.45 \times 6.3 =$

$24\ 1/2 \times 2\ 2/5 =$

$2\ 1/2 \div 1\ 1/4$

II.- HALLA el valor de X en cada una de estas igualdades:

*a) $\frac{X}{3} = 12.3$ X =

b) $36 - X =$ X =

c) $x^2 = 16 =$ X =

d) $X \quad x\ 7 =$ X =

e) $\frac{X}{6} = 2/3 =$ X =

III.- HALLESE las siguientes igualdades:

5.7 kms. = ______________ metros
27.5 dl. = ______________ litros
3 m^2 = ______________ cm^2
6 m^3 = ______________ dm^3
36 gramos = ______________ Decagramos

IV.- La longitud de un punto de la tierra es (50° 49' 30") oeste y la de otro punto es (61° 31' 45") oeste.
HALLESE la diferencia de longitud para ambos puntos.

V.- Si 20 obreros hacen un trabajo en 18 días, cuántos obreros lo harán en 12 días?

OPERACIONES

RESPUESTA: ______________________

VI.- SUBRAYA en la columna de la derecha lo que creas que completa correctamente el sentido de lo expresado en la columna de la izquierda:

(capacidad
a) El litro es una unidad de .... (peso
(volumen

(1:2
b) La razón 3:9 es igual a la razón .... (1:
(1:3

(180°
*c) La suma de los ángulos de un triángulo es .... (360°
(90°

(exágono
d) El polígono de cinco lado es el .... (pentágono
(cuadrilátero

*e) El instrumento para medir ángulos se llama (transportador
(compás
(escuadra

VII.- BUSQUESE la raíz cuadrada de 190,969 y la raíz cúbica de 636,056.

VIII.- a) HALLAR el capital que al 4% da $14.60 de interés en 6 meses.

OPERACIONES

RESPUESTA: ______________________

b) En un colegio hay 750 alumnos inscritos de los cuales el 36% son hembras. Cuántos varones hay?

*IX.- HALLAR la hipotenusa de un triángulo rectángulo, cuya base es 12 cm. y cuya altura es de 5 cm.

X.- HALLAR la longitud de una circunferencia cuyo radio mide 10 cm.

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8°CURSO

ESTUDIOS SOCIALES

Nombre del alumno ____

Escuela ______________________ Lugar ____________________

Maestro ______________________________ Fecha ____________

I.- DA CONTESTACION a las oraciones escogiendo las palabras de las que están en el paréntesis:

(Sinaí, terrateniente, Evert, Tibet, Noble, Patricio, Mahoma, Carlomagno, Alejandro el Grande, Justiano, Constantino, Julio César.

a) Fué el primer emperador romano en aceptar el cristianismo ______________________________

b) Moisés recibió el Decálogo, Ley Divina en el Monte ______________

c) Fue un gran guerrero macedonio ______________________

d) La clase preponderante del sistema de gobierno llamado feudalismo fué ______________________

e) Fue un gran caudillo árabe ______________________

II.- ESCRIBE si o no en las rayas de la derecha según considere el significado de las siguientes expresiones:

1) La Odisea fue escrita por Heródoto? ______

2) El autor de la Divina Comedia fue Dante? ______

3) El rey Ricardo Corazón de León reconquistó a España de mano de los árabes? ______

4) Con la Hégira o huida de Mahoma se inicia la Era Musulmana? ______

*5) El Ramaya es un poema épico de India? ______

III.- ESCRIBE en cada una de las rayas de la izquierda el número correspondiente a lo que se te pide en la columna de la derecha.

______ Epaminodas
______ Napoleón
______ Leonardo de Vinci
______ Faraones
______ Jenofonte
______ Julio César

1. Eran enterrados en pirámides
*2. Escribió la Ciropedia
3. Gobernó a Francia con el título de emperador en la Edad Contemporánea.
4. Fue el pintor de la Gioconda
*5. Fue un héroe de la ciudad de Tebas

IV.- Al lado de las siguientes batallas, escribe los nombres de sus héroes:

*1) Zama ______________________________

*2) Waterloó ______________________________

*3) 30 de Marzo ______________________________

4) Maratón ______________________________

5) Maipú ______________________________

*V.- En el mapa de más abajo indica con el número correspondiente, el lugar de orígen de los siguientes personjes históricos:

1. José de San Martín
2. Simón Bolívar
3. José Martí
4. George Washington
5. Benito Juárez

(Map of the western hemisphere has been omitted.)

VI.- A continuación hay varias preguntas sobre la Revolución Francesa; léelas detenidamente, y da contestación según lo creas conveniente.

a) ¿Qué se perseguía con esta Revolución? ______________________________

____

b) ¿Dónde estalló ese movimiento de armas? ______________________________

____

c) ¿Qué importante recinto militar fue ocupado por el pueblo? __________

____

d) A cuál gobernante derrocaron? ______________________________

*e) ¿Cuál fue el principal orador de la Revolución? ______________________________

____

VII.- ESCRIBE en orden cronológico los números correspondiente a los siguientes hechos históricos:

1. Restauración de Rep. Dom. ____
2. Renacimiento ____
3. Primera Guerra Mundial ____
4. Edad Media ____
5. El Imperio Romano ____

VIII.- De las palabras encerradas en paréntesis, subraya la que complete correctamente el sentido de las siguientes expresiones.

*a) Inventor de la imprenta (Gutemberg, Einstein, Fleming)
b) Descubrió el océano Pacífico (Vasco de Gama, Vasco Núñez de Balboa, Hernando de Soto).
c) Invento que se atribuye a los chinos (ferrocarril, aeroplano, pólvora).
d) Guerra celebrada por el reinado entre Francia e Inglaterra (Médicas, de los Cien Años, Púnicas).
e) Los faraones en Egiptos Irán (reyes, príncipes, señor feudal).

IX.- LLENA los espacios en blanco:

*1) ____________________ lugar donde se registran los matrimonios.
2) Las Cámaras de Senadores y Diputados forman la ____________________
3) El ____________________ es el ejecutivo del Ayuntamiento.
4) El Poder Judicial tiene como misión ____________________
5) La ____________________ es la encargada de recaudar los dineros del pueblo en la provincia.

X.- CONTESTA las siguientes preguntas acerca del Cristianismo:

a) ¿Quién fue su fundador? ____________________
b) ¿Quienes fueron sus propulsores?____________________
c) ¿Quiénes persiguieron esta religión? ____________________
d) ¿Cómo se llaman sus seguidores? ____________________
e) Qué persigue con esta religión? ____________________

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PRUEBAS GENERALES DE TERMINO DE LA EDUCACION INTERMEDIA PARA ADULTOS. AÑO LECTIVO 1974/75.

8º CURSO

FISICA Y QUIMICA

Alumno ______________________________

Escuela ____________________ Lugar ____________

Maestro ____________________ Fecha ____________

I.- COMPLETA correctamente lo siguiente:

1) La propiedad que tienen loscuerpos de no poder ocupar a la vez un mismo lugar en el espacio, se llama : ____________

2) Los cuerpos están formados por pequeñas partículas llamadas ____________

*3) El ____________ es un fenómeno atmosférico.

4) La materia al quemarse se transforma en carbón; este fenómeno recibe el nombre de ____________

5) Los cuerpos que se abandonan en el espacio caen en la tierra debido a una fuerza que los atrae llamada ____________

II.- DA contestación a las preguntas que se hacen a continuación relacionadas con el sonido.

1) ¿Cómo se origina? ____________

2) ¿En qué cuerpos se propaga con mayor velocidad? ____________

3) ¿Cómo se propaga? ____________

4) ¿Cuándo se convierte en ruido? ____________

5) La parte de la Física que estudia el sonido se llama? ____________

III.- De las palabras encerradas en paréntesis, subraya la que complete mejor el sentido de la oración:

1) La cantidad de lluvia caída en tiempo determinado se mide con el (pluviómetro, litro, anemómetro).

2) La propiedad que tienen los cuerpos de recobrar su forma tan pronto cesa la fuerza deformadora, se llama (cohesión, inercia, elasticidad)

3) Aparato que sirve para ver a larga distancia (telescopio, microscopio, periscopio).

4) Las palancas se usan para (ahorrar fuerza, producir fuerza, acomodar fuerza).

5) La presión atmosférica se mide por medio del (dinamómetro, barómetro, termómetro).

IV.- EXPRESA tus ideas acerca de lo siguiente:

1) Principio de Blas Pascal sobre la presión de los líquidos __________

____

2) Principio de Arquímides sobre los cuerpos sumergidos __________

____

V.- LLENA los siguientes espacios en blanco:

a) La luz se propaga en ____________________

b) Su velocidad es de __________ kms. por segundo.

c) ¿Qué le ocurre cuando llega a una superficie pulimentada? __________

____

d) ¿Qué le ocurre a un rayo de luz cuando atraviesa un prisma de cristal

____

e) Cuando pasa de un medio a otro de distinta densidad sufre el fenómeno llamado? ____________________

VI.- a) Más abajo aparecen dibujadas tres palancas, escribe el género a que corresponde a cada una.

(Drawing has been omitted.)

b) DA contestación a estas preguntas:

1. En la palanca de 2do. género, dónde se encuentra situada la resistencia? ____________________

2. En la palanca de tercer género, dónde se encuentra situada la potencia? ____________________

VII.- Al lado de cada una de las fórmulas escribe el nombre del compuesto que representa:

CLNa ____________ BrK ____________ CLH ____________

CaO ____________ H^2O ____________

VIII.- ESCRIBE los símbolos que representa a estos metales:

Hierro __________, aluminio __________, magnesio __________, cobre __________, potacio __________

IX.- DEFINE estos conceptos:

1) Dilatación ______________________________

2) Solidificación ______________________________

3) Sublimación ______________________________

4) Condensación ______________________________

5) Fusión ______________________________

X.- RESUELVE:

¿Cuál fué la velocidad media que llevó un automóvil que recorrió una distancia de 252 kms. en 3 1/2 horas?

VALORACION EN EL TEMA VI EL APARTADO A VALE 6 PUNTOS Y EL B 4 PUNTOS.

República Dominicana

SECRETARIA DE ESTADO DE EDUCACION, BELLAS ARTES Y CULTOS

Dirección General de Educación de Adultos.

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PRUEBAS GENERALES DE TERMINO DE LA EDUCACION INTERMEDIA PARA ADULTOS. AÑO LECTIVO 1974/75.

8º CURSO

INGLES

Nombre del alumno ______________________________

Escuela ______________________ Lugar ____________

Maestro ______________________ Fecha ____________

I.- TRADUZCA AL ESPAÑOL las siguientes expresiones:

Ej.: Five pencils	cinco lápices
a) Three books	______________
*b) Eight boxes	______________
c) Four apples	______________
d) Seven airplanes	______________
e) Six students	______________

II.- COMPLETA las siguientes oraciones con la forma correcta del verbo TO BE

1) I ____________ a teacher

2) He ____________ a student

3) We ____________ students

4) She ____________ a teacher

5) They ____________ women

III.- ESCRIBE el femenino de las siguientes palabras:

father __________, brother ______________, Mr. __________

His ____________, son ______________

IV.- ESCRIBE en inglés las siguientes palabras:

a) Hija ________________

b) Mañana ________________

c) Martes ________________

*d) Esposo ________________

e) Miércoles ________________

V.- COMPLETA las siguientes expresiones usando una de las palabras que más convenga, de las que figuran a continuación:

(Where, How Many, What, Who, How)

1. ________________ is your name.

2) ______________ old are you
3) ______________ is your teacher?
4) ______________ are there in the family?
5) ______________ are you now?

VI.- CAMBIA las oraciones siguientes a la forma negativa.

a) You are woman ______________________________
b) We are in the classroom ______________________________
c) I am Marina ______________________________
d) You are the teacher ______________________________
e) This is a family ______________________________

VII.- a) ESCRIBE en inglés los cinco primeros meses del año.

1. ______________, 2. ______________, 3. ______________
4. ______________, 5. ______________

VIII.- A continuación aparece una lista de palabras escritas en inglés. Pon al lado de cada una la correspondiente en español.

*1) Good by ______________
2) Street ______________
3) School ______________
4) Chair ______________
5) Classroom ______________

IX.- LLENA los espacios en blanco de acuerdo a la hora que indican las siguientes esferas. Fíjate en el ejemplo.

Ej.:

Ej.: What time is it?
It's fifteen minutes after five

1) What time is it?
____

2) What time is it?
____

X.- DICTADO. Escribe lo que te dicte el profesor.

(5 palabras o frases)

______________ ______________
______________ ______________
____

(Sixth Grade)
(District II)

República Dominicana
SERVICIO NACIONAL DE EDUCACION
PRUEBAS GENERALES DE TERMINO DE EDUCACION PRIMARIA
AÑO LECTIVO 1974 - 75.

LECTURA COMPRENSIVA

"EL LABRADOR Y EL TESORO ESCONDIDO"

Un anciano labrador tenía dos hijos. Un día, sintiéndose gravemente enfermo y ya próximo a morir, los llamó a su cabecera y les habló así:

-Hijos míos, antes de morir, quiero dejaros mi granja por herencia, lo que os repartiréis por mitades. Deseo que la sigáis cultivando, pues en ella encontraréis gran tesoro, a uno o dos pies de profundidad.

Creyendo los hijos que se trataba de algún dinero enterrado por su previsor padre, se pusieron a cavar las tierras palmo a palmo.

Extenuados de fatiga no hallaron tesoro alguno; pero la tierra perfectamente desterronada y removida les dió abundantes cosechas, justa recompensa a su trabajo y esfuerzo.

El trabajo solícito y constante es fuente de riqueza.

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AÑO LECTIVO 1974 - 75.

Nombres y apellidos del alumno ______________________________

Escuela ______________________________ Localidad ______________

Nombre del maestro ______________________________ Fecha ______________

CUESTIONARIO

1. ¿Cuál es el título de lo que acabas de leer? ______________________
2. ¿Cómo se sentía el anciano? ______________________________
3. ¿Cuántos eran sus hijos? ______________________________
4. ¿Qué habló el padre a sus hijos? ______________________________
____
5. ¿Qué les dijo que quería que hicieran con la granja? ______________
____
6. ¿De qué creían los hijos que se trataba? ______________________
____
7. ¿Qué hicieron entonces? ______________________________
8. ¿Encontraron oro? ______________________________
9. ¿Qué les ofreció la tierra removida? ______________________
____
10. ¿Qué es el trabajo solícito y constante? ______________________
____

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AÑO LECTIVO 1974 - 75.

LENGUA ESPAÑOLA: EXPRESION Y COMUNICACION ESCRITA

Nombres y apellidos del alumno ______________________________

Escuela ______________________________ No. de orden ______________

Localidad ______________________________ Fecha ______________

Aquí te presentamos dos temas difrentes para que escojas el que más te agrade y hagas un ejercicio de composición. No te precipites al hacerlo, ya que tienes tiempo suficiente para presentar un buen trabajo. Recuerda que las faltas de ortografía se tomarán en consideración al calificar. Puede utilizar el respaldo de esta hoja.

TEMA I:

Redacte un aviso para publicarlo en un periódico local, por medio del cual solicitas un empleo, en la actividad que prefieras. (Mensajero, cobrador, mecanógrafo, jardinero).

TEMA II:

Escribe una carta a una amiga, invitándola a asistir a tu graduación en la que recibirás el diploma de 6to. curso.

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PRUEBAS GENERALES DE TERMINO DE LA EDUCACION PRIMARIA

AÑO LECTIVO 1974 - 75.

CALIDAD Y FLUIDEZ DE LA ESCRITURA

Nombres y apellidos del alumno ______________________________

Escuela ______________________ Fecha ____________________

Localidad ____________________________ No. de orden ________

Nombre del maestro ______________________________________

ADVERTENCIAS AL ALUMNO

Con esta prueba se trata de apreciar la calidad y fluides de la escritura. Escribe normalmente tratando de hacerlo con limpieza y con tu mejor letra. Escribe la siguiente oración cuantas veces puedas. Comienza cuando te lo indique el jurado. Si es necesario escribe a la vuelta de la hoja.

Los burros y los bueyes son buenos auxiliares del hombre.

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PRUEBAS GENERALES DE TERMINO DE LA EDUCACION PRIMARIA
AÑO ESCOLAR 1974/75.

LENGUA ESPAÑOLA: INFORMACION GRAMATICAL

Nombres y apellidos del alumno ______________________________

Escuela ______________________ No. de orden ______________

Localidad ______________________ Fecha ______________

Nombre del maestro ______________________________

I.- Escribe una S sobre la raya que está al lado de cada palabra, si es sustantivo; una V si es verbo y una A si es un adjetivo.

Mariposa ___, España ___, triste ___, tener ___, lápiz ___,
pequeño ___, sentir ___, cantaré ___, sucio ___, rojo ___.

II.- Completa lo siguiente:

a) El idioma que se habla en nuestro país es el ______________

b) El ______________ es la palabra principal del sujeto.

c) El accidente gramatical que nombra el macho y a la hembra se llama ______________

d) La palabra que indica acción o movimiento se llama ______________

e) La ______________ nos enseña a escribir correctamente las palabras.

III.- Subraya los pronombres en cada una de las expresiones siguientes y en la línea que hay al lado, escribe la clase o persona a que pertenece.

a) La casa es ésta ______________________

b) Nos quieren mucho ______________________

c) Dame uno de los tuyos ______________________

d) Aquel no compitió en la justa ______________________

e) Mi clase es ahora ______________________

*IV-A.- Escribe el antónimo de las siguientes palabras:

a) Bonito ______________, b) contento ______________, c) alto ______

d) honesto ______________, e) blanco ______________

*IV-B.- Escribe el sinónimo de las siguientes palabras:

a) Ascender ______________, b) caminar ______________, c) asno ______

d) laborioso ______________, e) agitar ______________

*V.- Ordena alfabéticamente las siguientes palabras:
Cabrera ____________________, Hidalgo ____________________
Espinosa ____________________, González ____________________
Abréu ____________________, Ureña ____________________
López ____________________, Díaz ____________________
Fernández ____________________, Batista ____________________

VI.- Escribe el plural de las palabras siguientes:
Mártir ____________________, rey ______________, luz __________
lápiz ____________________, compás ____________________

VII.- Escribe dos derivados de cada palabra:
piedra ____________________, ____________________
zapato ____________________, ____________________
tierra ____________________, ____________________
casa ____________________, ____________________
pan ____________________, ____________________

*VIII.- Escribe la palabra o laspalabras correspondiente a cada abreviatura:
Dra. ________________, Dtor. ______________, Dr. ______________
C/u. ________________, C/o. __________________________

IX.- En las siguientes oraciones subraye los verbos y escribe sobre la raya que está al lado de cada una de ellas, el tiempo en que están empleados:

a) María limpiará la casa ______________________________
b) Los niños están de fiesta ____________________________
c) Los alumnos llegaron temprano __________________________
d) Comeremos de esta naranja ____________________________
e) José está enfermo ________________________________

X.- En la siguientes oraciones subraya el sujeto:

a) Los niños desfilan por las calles.

b) José y Luis juegan en el patio.

c) De mucha utilidad es la naranja.

d) Ella camina con el niño de mano.

e) Las flores de este jardín son hermosas.

$\frac{X}{85}$

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Dirección General de Educación de Adultos.
PRUEBAS GENERALES DE TERMINO DE EDUCACION PRIMARIA
AÑO LECTIVO 1974 - 1975.

MATEMATICAS

Nombres y apellidos del alumno ______________________________
Escuela ______________________ No. de orden ______________
Localidad ____________________ Fecha ______________
Nombre del maestro ______________________________

I.- Haz los siguientes ejercicios:

46.5 + 8.40 + 5.80 =

12. 48 x 3.4 =

2.754 ÷ 0.2 =

89.34 - 54.84 =

94 + 7.34 + 7.8 =

II.- Las siguientes cantidades están en letras. Escríbelas en número sobre la raya que está al lado de cada una de ellas:

a) Quinientos mil ____________
b) Cuatro mil quince ____________
c) Cuatro millones quince mil cuatro ____________
d) Quinientos uno ____________
e) Dos millones ciento dos mil mil dos ____________

III.- Resuelve el siguiente problemita:

Si en una escuela hay 509 alumnos inscritos, de los cuales 140 son del primer grado, 98 del segundo, 83 del tercero, 90 del cuarto, 78 del quinto y el resto del sexto. ¿Cuántos alumnos hay inscritos en el sexto grado?

Planteo Operación Resp. ______________

IV- A.- Halla el valor a cada uno de los artículos de la siguiente factura:

Cantidad	Artículos	Precio por unidad	Valor
5 docenas	cuadernos	$1.10 docena	
8 docenas	lápices	$0.50 docena	
2 $\frac{1}{2}$ resmas	papel	$1.40 resma	
6 docenas	bolígrafos	$0.90 docena	

Total... RD$________

IV-B.- ¿Cuánto debo pagar por la factura anterior si me hacen un descuento de 2% por comprar al contado?

Planteo Operación Resp. ______________

V.- Completa estas equivalencias:

Quebrado	Decimal	Por ciento (%)
1/4		
	0.75	
4/5		
		50%
	0.40	

*VI.- **Realiza las siguientes operaciones:**

25 días 8 horas 37 minutos
- 3 " 15 " 43 "

2 quintales 6 arrobas 9 libras
X 3

VII.- **Resuelve el siguiente problema:**

En un colegio de 325 alumnos el 36% de los alumnos son extranjeros ¿Cuántos alumnos son nativos?

Planteo Operación Resp. ______________

VIII.- **Escribe al lado de cada descripción de la derecha, el nombre que corresponda de los que se encuentra a la izquierda. A manera de ejemplo el primer caso está resuelto:**

Diámetro	Diámetro	**Línea que divide el círculo en dos partes iguales.**
Pentágono		**Cuerpo formado por seis caras cuadradas.**
Angulo		**Cuadrilátero con dos caras paralelas.**
Trapecio		**Figura formada por 5 lados y 5 ángulos.**
Cubo		**Espacio formado por rectas que se cortan.**
Rombo		**Figura limitada por tres rectas.**
Triángulo		

República Dominicana

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Dirección General de Educación de Adultos

PRUEBAS GENERALES DE TERMINO DE EDUCACION PRIMARIA

AÑO LECTIVO 1974 - 75.

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Nombre del alumno ______________________________

Escuela ______________________ No. de orden ____________

Localidad ______________________ Fecha ____________

I.- En el mapa de la derecha pon el No. 1 al Océano Atlántico; el 2 a la Argentina; 3 al Río Amazonas; 4 al estrecho de Magallanes; 5 Venezuela; 6 Océano Pacífico; 7 Cordillera de Los Andes; 8 a Jamaica; 9 a Puerto Rico y 10 a Cuba.

(Map has been omitted.)

II.- Ordena cronológicamente los siguientes hechos históricos:

1. Primera Guerra Mundial	1. ____________
2. Fundación de Roma	2. ____________
3. Independencia de Estados Unidos.	3. ____________
4. Revolución Francesa	4. ____________
5. Nacimiento de Cristo	5. ____________

III.- Completa correctamente lo siguiente:

1) El día y la noche son producido por el movimento de ____________

2) El satélite de la tierra es ____________

3) El movimiento que da lugar a las estaciones del año es ____________

4) Una inmensa porción de agua salada se llama ____________

5) Un movimiento brusco producido por la tierra se llama ____________ ____________

IV.- De las palabras encerradas en el paréntesis subraya la que complete mejor el sentido de la oración.

1) Fué inventada por Juan Gutembert (pólvora, las máquinas, la imprenta).

Encierra en un círculo la V o la F según consideres falso o verdadero cada uno de los conceptos siguientes:

-2 a) El decilitro es menor que el litro .... V F
b) 17 es un número mixto .... V F
c) La línea que divide un cuadrilátero de vértice a vértice se llama.. V F
d) El cuadrado de 8 es 32 .... V F
e) El kilómetro es mil veces mayor que el metro .... V F

*f) 121/2 y 1/8 % son equivalentes.............................. V F
*g) El máximo común divisor de 8, 12 y 20 es 4 .... V F
h) La circunferencia es una línea curva cerrada .... V F
i) El triángulo equilátero tiene sus tres lados iguales......... V F
j) La bisectriz divide el triángulo en dos partes iguales ...... V F

X-A. Debajo de cada uno de estos dibujos, escirbe la fórmula para hallar su área o volumen según el caso:

*

X-B. Ponle el nombre a cada una de estas figuras:

2) Ganó la batalla de Waterloo (Juan Pablo Duarte, Napoleón Bonaparte, Juana Saltitopa).

3) La revolución que proclamó los derechos del hombre fué (la Revolución Francesa, Batalla 19 de Marzo o Santo Cerro).

4) Fué fundador de la Trinitaria (Juan Pablo Duarte, Pedro Santana, Gregorio Luperón).

5) El fundador de la compañía de Jesús fué (El Papa San Ignacio de Loyola, San Luis Gonzaga).

V.- En cada una de las expresiones siguientes, escribe una C si es correcta y una I si es incorrecta:

-4 1) Los fenicios se dedicaban al comercio y a la navegación ______

2) Bárbaros quría decir extranjero ______

*3) Cartago fué fundada por Dido _______

4) Las ciudades griegas de mayor importancia fueron Esparta y Atenas ____

*5) Núñez de Cáceres fué quien proclamó la Independencia Efímera _________

VI.- Subraya la palabra que complete el sentido de cada frase:

a) El descubridor de América fué (Américo Vespucio, Vasco Núñez de Balboa, Cristóbal Colón).

b) Los fenicios fueron grnades (navegantes, industriales, artistas).

c) Las guerras para librar los Santos Lugares de manos de los infieles se llamaron (Púnicas, Cruzadas, Médicas).

d) El imperio que duró 8 siglos fué (Fenicio, Caldeo, Asirio).

e) El que pintó la Santa Cena fué (Velásquez, Murillo, Vinci).

*VII.- Escoge el número de la columna de la izquierda para que lo coloques en la rayita de la derecha, indicando el río perteneciente a cada país.

1) La Plata	___ República Dominicana
2) Sena	___ Egipto
3) Soco	___ Francia
4) El Nilo	___ Venezuela
5) Magdalena	___ Argentina
6) Rin	

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AÑO LECTIVO 1974/75.

CIENCIAS NATURALES

Nombres y apellidos del alumno ______________________________

Escuela ______________________ No. de orden ______________

Localidad _______________________ Fecha ________________

Nombre del maestro ____________________________________

I.- Escribe en la rayade la descripción de la derecha, el número de la expresión de la izquierda que le corresponde.

*1. Peritóneo	___	Conserva la salud y se encarga de la limpieza del cuerpo.
*2. Las parótidas	*___	Son glándulas salivales situadas cerca del oído.
3. Higiene	___	Constituye el armazón sobre el cual se aplican los músculos.
4. Esqueleto	*___	Membrana que cubre los intestinos.
5. Pleura	___	Membrana que envuelve los pulmones.
*6 Meninges		

*II.- A continuación aparecen fenómenos, clasifícalos poniendo F o Q según sean físicos o químicos.

a) La maduración de un fruto .... ____
b) La caída de una piedra .... ____
c) La combustión de una hoja de papel .... ____
d) La trituración de un cuerpo sólido .... ____
e) La explosión de la dinamita .... ____
f) La oxidación del hierro .... ____
g) El sonido de una campana .... ____
h) El andén de una carretilla .... ____
i) La disolución del azúcar en el agua .... ____
j) Atracción de un clavo por un imán .... ____

III.- Contesta correctamente el sentido de cada una de estas oraciones:

a) El color rojo de la sangre se debe a ______________________

b) La sangre se purifica tomando ____________________

c) El corazón es el órgano principal del aparato ____________________

*d) La membrana que cubre el cerebro se llama ____________________

e) El órgano del sentido del gusto es ____________________

IV.- De las palabras encerradas en el paréntesis subraya la que complete mejor el sentido de la oración:

a) Es una sustancia que forma parte del agua (oxígeno, calcio, carbono).

b) La masticación es un acto de (circulación, digestión, respiración).

*c) El masetero es músculo de (la cabeza, extremidades, tronco).

*d) Disminuye la cohesión de los metales (frío, calor, humedad).

e) La sangre se purifica tomando oxígeno del aire en (el corazón, los pulmones, estómago).

V.- Dí para que tú usarías estos aparatos:

*1. Barómetro ____

2. Termómetro ____

3. Planca ____

*4. Sifón ____

*5. Brújula ____

VI.- A la derecha hay unas cuantas expresiones relacionadas con la lista de animales de la izquierda. Pon al lado de cada expresión el número del animal que corresponda.

1. Caimán
2. Cangrejo
3. Bacalao
4. Rana
5. Chivo
6. Murciélago
7. Ballena

___ Es un mamífero volador.

___ Es un mamífero vertebrado que corresponde al orden de los rumiantes.

___ Es un mamífero que se desarrolla debajo del agua de mar.

___ Animal vertebrado que corresponde al orden de los batracios.

___ Es un anfibio que corresponde a los reptiles.

*VII.- Al lado de cada metal escribe su símbolo.

Mercurio _______, Plomo ______, Calcio _____, Oro _____, Plata ______

VIII.- Dí la forma de reproducirse las palatas que se nombran a continuación:

Maíz ____

Batata ____

Coco ____

Plátano ____

Papa ____

IX.- De las palabras encerradas en el paréntesis subraya la que convenga mejor en cada caso:

a) El granizo es agua en estado (líquido, sólido, gaseoso).

b) Para medir el calor de una habitación se emplea (barómetro, termómetro, decímetro).

c) Los cuerpos al calentarse se (reflejan, refractan, dilatan).

d) El sonido se propaga en el espacio con una velocidad por minuto de (240m, 440m, 340m).

e) El paso de un cuerpo líquido a sólido se llama (licuación, evapora-

X.- En el siguiente dibujo ponle nombre a las partes que señalan las flechas

(Drawing of lungs has been omitted.)

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ECONOMIA DOMINICANA

Nombre y apellido del alumno ______________________________

Escuela ______________________________ No. de orden __________

Localidad ______________________________ Fecha __________

Nombre del maestro ______________________________

I.- En el mapa de más abajo señala con el No. 1 donde hay yacimiento de sal; con el 2 donde ahy yacimiento de hierro; con el 3 donde hay yacimiento de ferroníquel; con el 4 donde hay ámbar y con el 5 donde hay yeso.

(Drawing of the Dominican Republic has been omitted.)

II.- Contesta:

¿Cuándo se dice que un producto tiene demanda? ______________________________

____

¿Cuándo se dice que un producto tiene mucha oferta? ______________________________

____

III.- Escoge el número de la izquierda para que lo pongas en la derecha donde complete mejor la oración:

I- Banco Agrícola	___	Moneda en papel o metal de un país que sirve para cambio comercial.
2- Reforma Agraria	___	Grupo de personas que se unen voluntariamente para servirse así mismas.
3- Cooperativa	___	Institución comercial que concede préstamo cobrando un interés superior a la cooperativa
4- Industria	___	Sitio donde se transforma total o parcialmente la materia prima a fin de conseguir mayor producción.
5- Divisa	___	Organismo que asienta en tierras donadas por el Estado, a fin de que tenga mejor medio de vida.

IV.- ¿Cuál es tu opinión acerca de la reforma agraria?

V.- Contesta estas preguntas relacionadas con el mercado:

a) El mercado primitivo operaba a base de intercambio de productos, debido a ______________________________

b) A la salida de nuestros productos al exterior por efecto de venta se llama ______________________________

c) El intercambio de un producto por otro que tuvo lugar en el mercado primitivo se le llama ________________________

d) La importación de productos extranjeros consiste en ____________ ______________________

*e) Metaldón es una empresa que se ocupa de la industria del _______ ______________________

VI.- Escribe una V si es verdadera y una F si es falsa cada una de las expresiones siguientes:

1) Moneda es un instrumento de cambio que facilita las operaciones comerciales _________

2) Demanda es el ofrecimiento que se hace al consumidor de los productos cosechados ________

3) Latifundio son grandes extensiones de tierra que acumulan los adinerados en perjuicio de los agricultores de escasos recursos _____

4) Banco de Reservas, es una institución que concede créditos a los agricultores par la siembra _____

5) Cooperativas, son asociaciones de personas para protegerse mutua mente y lograr condiciones de vida mejor _____

VII.- De las palabras encerradas en el paréntesis subraya la que mejor complete la oración.

1. La República Dominicana vende mayor parte de azúcar a (España, Estados Unidos, Alemania).

2. La mina de bauxita se encuentra en (La Vega, Higuey, Pedernales)

3. En la antiguedad el comercio se hacia cambiando un producto por otro, a ésto se le llamó (oferta, trueque, demanda).

4. La mina de sal más importante se encuentra en (Santiago, Montecristi, Barahona).

5. Los yacimientos mineros del país que pueden dan margen al desarrollo industrial son (azúcar, ferroníquel, oro).

*VIII.- Explica:

a) Que son ferias ganaderas:

b) Que son ferias regionales:

IX.- Contesta las preguntas que se hacen a continuación relacionadas con los bancos comerciales:

1) Cita dos operaciones que realizan ______________________________,
______________________________.

2) ¿Qué importancia tienen los bancos? ______________________________
____

3) Cómo influyen en el desarrollo agrícola ______________________________
____

4) ¿Cuáles son las funciones del Banco de Ahorro y Crédito? ______
____

X.- A la izquierda hay varias palabras numeradas y a la derecha se definen algunas de dichas palabras. Coloca al lado de cada definición el número de la palabra definida.

1- Exportación

2- Cooperativa

3- Reforma Agraria

4- Canales de riego

5- Mercado negro

6- Importación

7- Feria

8- Canje

9- Oferta

___ Es la acción que ejerce el gobierno para que los agrigultores tengan tierra donde trabajar.

___ Es la actitud por la cual el comerciante trae productos de otros países para ofrecerlos al consumidor.

___ Es una asociación de personas con fines de protegerse mutuamente y lograr mujores condiciones de vida.

___ Acaparar productos para venderlos a sobre precio.

(Eighth grade)
(District II)

República Dominicana

SECRETARIA DE ESTADO DE EDUCACION, BELLAS ARTES Y CULTOS

Dirección General de Educación de Adultos.

PRUEBAS GENERALES DE TERMINO DE LA EDUCACION INTERMEDIA PARA ADULTOS. AÑO LECTIVO 1974-1975.

LENGUA ESPAÑOLA: COMPRENSION DE LA LECTURA

ADVERTENCIAS AL ALUMNO

Trata de comprender la siguiente lectura, léela con detenimiento para que puedas contestar el cuestionario que se te dará en seguida.

El filósofo griego Diógenes predicó la vida sencilla y dura; pasó gran parte de su existencia viviendo al aire libre o en una enorme barrica que le servía de morada. Se alimentaba con lo estrictamente necesario; llevaba sus pies descalzos y se cubría con telas ordinarias y simples.

Durante el invierno veíasele en Atenas, y en el verano, en Corinto.

Cuéntase que en esta última ciudad recibió la visita de Alejandro Magno. El famoso emperador se aproximó al tonel dentro del cual se hallaba el filósofo y preguntó a éste:

-¿Qué solicitas de mí? ¿Qué me pides?

Diógenes repuso:

-Que te apartes para que tu sombra no me impida gozar del sol.

Cierta vez fué invitado por Platón a un banquete suntuoso que éste daba en su casa. Diógenes entró descalzo y escupió sobre las alfombras, mientras decía: "Estoy pisando el orgullo de Platón".

El filósofo atrevido pretendía con tan extraña actitud, exteriorizar su desprecio por el lujo.

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$\frac{X}{100}$

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Escuela ______________________________ No. de orden ____

Localidad ______________________ Fecha __________________

Nombre del maestro ______________________________

C U E S T I O N A R I O

1. ¿Cuál es el nombre del filósofo que trataba la historia que leiste? ______________________
2. ¿Dónde pasó gran parte de su existencia? ______________________ ______________________
3. ¿Con qué se alimentaba? ______________________
4. ¿Cómo llevaba los pies? ______________________
5. ¿Cómo se vestía? ______________________
6. ¿Dónde se veía durante el invierno? ______________________
7. ¿De cuál emperador recibió visita? ______________________
8. ¿Qué preguntó el emperador al filósofo? ______________________ ______________________
9. ¿Qué contestó el filósofo? ______________________ ______________________
10. ¿Quién invitó el filósofo a un banquete? ______________________ ______________________

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Escuela ______________________________ No. de orden __________

Localidad ______________________________ Fecha ______________

Nombre del maestro ______________________________

LENGUA ESPAÑOLA: CALIDAD Y FLUIDEZ DE LA ESCRITURA

ADVERTENCIAS AL ALUMNO

Escribe el siguiente verso las veces que te sea posible. No te precipites. Escribe normalmente tratando de hacerlo con limpieza y tu mejor letra.

Las princesas primorosas
se parecen mucho a tí:
cortan lirios, cortan rosas,
cortan astros, son así...

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LENGUA ESPAÑOLA: EXPRESION Y COMUNICACION ESCRITA

Nombres y apellidos del alumno ______________________________

Escuela ______________________________ No. de orden __________

Localidad ____________________________ Fecha ________________

Nombre del maestro ______________________________

ADVERTENCIAS AL ALUMNO

Aquí te presentamos dos temas diferentes para que escojas el que más te agrade y realices un ejercicio de composición. No te precipites al hacerlo, ya que tienes tiempo suficiente. Recuerda que las faltas de ortografía se toman en consideración al calificar.

Utiliza el respaldo de esta hoja, si fuere necesario.

TEMA I:

Haz el retrato de una persona querida por tí. Esto es, hacer la descripción por escrito de la persona escogida.

TEMA II:

Interpretar con palabras de tu propio vocabulario, el siguiente pensamiento de José Martí, al escribir estos sencillos versos:

Cultivo una rosa blanca
en Junio como en enero, para
el amigo sincero que me da su
mano franca.
y para el cruel que me
arranca el corazón con que vivo,
cultivo una rosa blanca.

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Dirección General de Educación de Adultos
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AÑO LECTIVO 1974/75.

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INFORMACION GRAMATICAL

Nombre del alumno ________________________________
Escuela ____________________ No. de orden ____________
Localidad ____________________ Fecha ____________
Nombre del maestro ________________________________

I.- Convierte estas oraciones activas en pasivas:

1) Luis lee la clase ____________________
2) Yo he recibido un regalo ____________________
3) El sastre hizo un traje ____________________
4) El niño rompió el lápiz ____________________
5) La madre abandonó el niño ____________________

II.- Diga que parte de la oración es cada palabra subrayada:

1. María está sin zapatos ____________________
2. Un niño cruzó la calle ____________________
3. Llegó tarde a la escuela ____________________
4. Desde aquí hablaré a mi padre ____________________
5. Juan va a Santiago mañana ____________________

III.- Subraya de la lista de la derecha, la expresión que consideres completa el sentido de cada una de las oraciones de la izquierda:

El poema "Arriba el Pabellón" fué escrito por	Salomé Ureña José Joaquín Pérez Gastón F. Deligne
Salomé Ureña escribió	La llegada del Invierno Fantasía Indígena
Enriquillo, novela que la escribió	Bernardo Pichardo Manuel de Js. Galván Fabio Fiallo
Miserere, escrita por	Enríque Henríquez Rafael Deligne Arturo Pellerano
Fantasía Indígena, verso de	Emiliano Tejera José Gabriel García José Joaquín Pérez

IV.- Haz el plural de estas oraciones:

a) El alelí está marchito ______________________________

b) Se le dará a cualquiera ______________________________

c) Ese muchacho es audaz ______________________________

d) Aquel joven es muy cortés ______________________________

e) Mi hermano es de carácter alegre ______________________________

V.- De las diferentes palabras que hay a continuación escoge las que creas están definidas más abajo y colócalas sobre la raya en blanco correspondiente:

Sintasis figurada, complemento, semántica, preposición, análisis gramatical, verbo, hiperbatón.

a) ______________________ conjunto de palabras que precisan o completan el significado de otra.

b) ______________________ elemento invariable que sirve de enlace entre las palabras u oraciones.

*c) ______________________ es la ciencia que estudia el significado de las palabras y su evolución.

*d) ______________________ es la construcción que no sigue el orden establecido por la sintasis regular.

e) ______________________ palabra varable de la oración que expresa acción, estado, pasión existencia, con indicación casi siempre de tiempo, número y persona.

VI.- Subraya el sujeto en cada una de las oraciones siguientes y dí sí es simple, compuesto o complejo.

a) La niña nombrada Luisa, obtuvo el premio ______________________

b) En toda la sociedad la educación es un factor de primer orden ______ ______________________________

c) Llegaron los excursionistas cuando el alba despertaba los rosales___ ______________________________

d) La educación exige nuevos métodos ______________________

e) Rosa la hija de Luis es una niña aplicada ______________________

VII.- En las oraciones que aparecen a continuación hay varios adjetivos, subráyelos y dí el grado en que están expresados:

1) El río Yuna es caudaloso ______________________________

2) El examen está óptimo ______________________________

3) Ese hombre es paupérrimo ______________________________

4) Mi nota este año será superior ______________________________

5) El caballo es más grande que el burro ______________________________

VIII.- Explica brevemente el significado de estas oraciones:

a) A quien madruga, Dios lo ayuda ______________________________

____

b) Más vale ser cabeza de ratón y no rabo de león ______________

____

____

X.- Conjuga el verbo tener en el modo, tiempo y persona que se indica a continuación:

Modo subjuntivo

Pretérito	Futuro
Yo ______________	El ______________
Tú ______________	Ellos ______________
Nosotros ______________	

$\frac{X}{98}$

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Dirección General de Educación de Adultos

PRUEBAS GENERALES DE TERMINO DE EDUCACION INTERMEDIA 8ª CURSO
AÑO LECTIVO 1974/75.

MATEMATICAS

Nombre del alumno ____________________________________

Escuela ____________________________ Fecha ____________

Localidad __________________________ No. de orden ________

Nombre del alumno ____________________________________

I.- Resuelve: lo siguiente:

a) 3.25 X 0.8 =

b) 3 1/2 X 21/4 =

c) 32 - 82/5 =

d) 5/6 - 2/8 =

e)^2 1648

II.- a) Pasa una raya debajc de la contestación correcta:

3 3/4 es un quebrado

mixto
propio
impropio

*b) El lado mayor de un triángulo rectángulo se llama:

hipotenusa
cateto
secante

c) Fórmula para hallar el tanto por ciento:

$\frac{C \text{ X } \%}{100}$

$\frac{1 \text{ X } 100}{\%}$

Ninguna de las anteriores

d) El valor del es:

$\frac{22}{7}$

$\frac{4}{20}$

$\frac{2}{5}$

e) Cuatro al cubo es igual a:

82
64
16

III.- Si 8 obreros hacen un trabajo en 75 días. ¿Cuántos obreros pueden hacer el mismo trabajo en 40 días?

PLANTEO OPERACION

RESP. ____________________

IV.- Determine el valor de X en cada caso:

a) $X^3 = 1000$ X = ____________________

b) $15 - 8 = X - 10$ X = ____________________

c) $\frac{75}{X} = 25$ X = ____________________

d) $\frac{X}{5} = \frac{10}{35}$ X = ____________________

e) $X^2 = 144$ X = ____________________

V.- Completa cada una de las expresiones siguientes:

a) Es el dinero que pagamos por el dinero prestado ____________________

b) Rebaja que se hace en el precio de un artículo ____________________

c) ¿Qué operación debemos hacer para hallar el total de varios números diferentes? ____________________

d) Espacio limitado por 2 rectas que se cortan en un punto ____________________

e) Numerito que se coloca a la derecha de un número para indicar la potencia se llama ____________________

VI.- Resuelve el siguiente problema:

Una señora prestó $125.00 por un mes. En la negociación se ganó $15.00 ¿Qué por ciento de beneficio obtuvo?

PLANTEO OPERACION

RESP. ____________________

VII.- Completa:

a) La ____________________ es la línea que une dos vértice no consecutivos.

b) La superficie limitada por la circunferencia se llama ____________________

c) Los cuadrantes de la circunferencia miden ____________ grados.

d) La relación entre la circunferencia y su diámetro se llama ____________________

IX.- a) Determina el máximo común divisor de los siguientes números:

60 - 36 - 24 =

b) Determina el número común múltiplo de las siguientes cantidades:

16 - 12 - 20 =

X.- José cosechó 13216 quintales de arroz. Vendió 5/8 de la cosecha.
a) Cuántos quintales vendió?

PLANTEO OPERACION

RESP. ______________

b) El precio de venta del arroz fué de RD$23.50 cada quintal. ¿Cuánto pesos recibió por la venta?

PLANTEO OPERACION

RESP. ______________

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Dirección General de Educación de Adultos

PRUEBAS GENERALES DE TERMINO DE EDUCACION INTERMEDIA
AÑO LECTIVO 1974/75.

ESTUDIOS SOCIALES

Nombre del alumno ______________________________

Escuela ______________________ No. de orden __________

Localidad ______________________ Fecha __________

Nombre del maestro ______________________________

I.- A continuación te damos una serie de personajes para que pongas el número que hay delante de cada personaje en el lugar que éste conquistó o descubrió; para ello te damos luego un mapa:

1, Hernán Cortés; 2, Diego Velásquez; *3, Juan de Esquivel; 4, Vasco Núñez de Balboa; 5, Francisco Pizarro.

(Map of western hemisphere has been omitted.)

II.- Ordena cronológicamente los siguientes hechos históricos, escribiendo los números del 1 al 5 sobre la rayita de la izquierda:

____ Guerra de los Cien Años

____ Invación de los Bárbaros

____ Revolución Francesa

____ Descubrimiento de América

____ Independencia de Estados Unidos

III.- Subraya la palabra del paréntesis que considere completa correctamente cada oración:

*a) La orden de caballería fué en la Edad (Antigua, Media, Contemporánea).

b) El Rey de los Hunos era (Carlomagno, Atila, Luis XVI).

*c) El héroe de la Restauración fue (Sánchez Ramírez, Luperón, Boyer).

d) El Templo de Jerusalén fué fundado por (Salomón, Atilas, Alejandro Magno).

*e) Inventó la brújula(Bell, Gutemberg, Arquímedes).

IV.- Contesta correctamente:

a) La Guerra Púnica fué entre ______________ y ______________

b) Rómulo fundó a ________________________

c) El primer patriarca del pueblo Hebreo fué ________________

d) La Ilíada relata un episodio de la guerra de ______________

e) Las principales ciudades Fenicias fueron ____________ y ________ ____________________

V.- Al lado de las siguientes frases escribe una F si es falsa y una V si es verdadera.

a) Con la toma de la Bastilla se da inicio a la revolución francesa ___

b) La Compañía de Jesús fué fundada por Ignacio de Loyola ____

c) La Biblia es el libro sagrado de los mahometanos ____

d) La Hégira o huida de Mahoma señala el inicio de la era Musulmana ___

e) Los Fenicios fueron grandes agricultores ____

VI.- Explica brevemente estos acontecimientos históricos:

a) Toma de la Bastilla.

b) El Feudalismo.

*VII.- Aquí tienes algunas frases célebres y los nombres de los personajes que ladijeron; escribe sobre la raya el nombre del personaje que pronunció cada frase.

Alejandro, Monroe, Duarte, Mirambeaux, Napoleón Bonaparte

____________________ "El primer deber del hombre es ser justo"

____________________ "Soldado desde lo alto de estas pirámides 40 siglos os contemplan"

____________________ "Mis funerales serán sangrientos"

____________________ "Id a decir a vuestro amo que estmaos reunidos por la voluntad del pueblo, y no nos arrancará de aquí sino la fuerza de las bayonetas"

____________________ "América para los americanos"

VIII.- Los conceptos expresados más abajo pueden ser correctos o no. Indica con un C los correctos y con una I los incorrectos.

a) La Compañía de Jesús fue creada para darle impulso a la reforma protestante. ____

b) Libertad, igualdad y fraternidad fue el lema de la Revolución Francesa. ____

c) El cristianismo tuvo su origen en Rusia. ____

d) Los juegos olímpicos se jugaron por primera vez en Grecia ____

e) Jorge Washington fué el primer presidente de Francia ____

IX.- A continuación te damos una serie de hechos históricos; escribe al lado de cada uno el personaje que lo realizó.

*1) Modifico el derecho romano ______________________________

2) Asesinó el Emperador Julio César ______________________________

3) Rey bárbaro que fundó el reino de los Francos ______________

4) Heroína francesa que participó en la Guerra de Cien Años y que murió quemada viva ______________________________

*5) Es considerado como el verdadero fundador de la democracia de la

X.- a) Escribe algo sobre el bautismo como sacramento.

X.- b) Contesta lo siguiente acerca de la vida de Jesús:

a) Lo que predicaron la doctrina de Cristo eran los ____________ ______________________

b) Cristo murió y resucitó al ________________ día.

c) Jesús se perdió y fué encontrado en el ________________

d) El apóstol que lo vendió fué ______________________________

e) El tribunal que lo condenó fué el __________________________

República Dominicana

SECRETARIA DE ESTADO DE EDUCACION, BELLAS ARTES Y CULTOS

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Dirección General de Educación de Adultos

PRUEBAS GENERALES DE TERMINO DE LA EDUCACION INTERMEDIA
AÑO LECTIVO 1974/75.

FISICA Y QUIMICA

Nombre del alumno ____

Escuela __________________________ No. de orden ____________

Localidad ________________________ Fecha ________________

Nombre del maestro ____

I.- Completa correctamente:

a) La parte de la física que trata del estudio de la luz se llama? ______________________

b) La acústica trata sobre ________________________________

*c) La parte de la física que trata del estudio de las imágines ______________________

*d) La mecánica trata sobre ________________________________

e) La termología trata sobre ________________________________

II.- a) Al lado de cada uno de los productos siguientes, escribe su aplicación:

Kerosene ________________________________

Trementina ________________________________

Nafta ________________________________

Bencina ________________________________

*Creosota ________________________________

b) Al lado de cada fórmula química, escribe el nombre del producto:

CO_2 ____________________, CLH ____________________

SO_4H_2 ____________________, H_2O_2 ____________________

SO3 ____________________

III.- En cada una de las expresiones siguientes, escribe una F si es falsa y una V si es verdadera:

a) El peso de los cuerpos es una consecuencia de la gravedad ____

b) El cuerpo que recorre espacios iguales en tiempos iguales lleva un movimiento acelerado ____

c) Las palancas se usan para acular fuerza____

d) La presión atmósferica se mide por medio del dinamómetro ____

e) La impenetrabilidad, extensión e inercia son las propiedades fundamentales de la materia ____

IV.- En la siguiente gráfica A es un rayo luminoso; M es un espejo sobre el que indice. Observa bien la gráfica y contesta lo siguiente:

(Drawing omitted.)

a) El rayo B que sale del espejo se llama ____________________

b) El rayo A que llega al espejo se llama ____________________

c) La línea imaginaria X que separa ambos rayos recibe el nombre de ______________

d) El ángulo que forma la línea imaginaria X con el rayo A, se llama ______________

e) El ángulo que forma la líneaX con el rayo B, se llama ____________________

V.- Observa las figuras con sus detalles y responde las preguntas que se te hacen:

(Drawing omitted.)

1) ¿Por qué se repelen las dos barras de vidrio que están electrizadas?
____

2) ¿Porqué se atraen la barra de vidrio y la de ebonita electrizada?
____

3) ¿Cuántos tipos de electricidad hay? ____________________
____

4) ¿Qué es la corriente eléctrica? ______________________________
____

5) Los alambres que conducen la corriente èlectrica, ¿qué nombre tienen ________________________

VI.- Encierra en un círculo la respuesta correcta en cada caso:

a) El aparato que mide la velocidad del viento se llama: Anemómetro, veleta, pluviómetro.

b) El agua químicamente es una combinación de: fósforo y oxígeno, carbono y oxígeno, hidrógeno y oxígeno.

c) El cambio de dirección que sufre un rayo de luz al pasar de una superficie más densa a otra menos densa: reflexión, impresión, refracción.

d) El dimante es un: carbón artificial, carbón puro, metaloide.

e) Las sustancias que enrojecen el papel de tornasol: sales, ácidos, bases.

VII.- En la columna de la izquierda aparecen algunas propiedades de los cuerpos, a la derecha se definen algunas de ellas. Coloca el número de cada una de las propiedades al lado de la expresión que la define.

1. Divisibilidad
2. Maleabilidad
*3. Porosidad
4. Elasticidad
5. Inercia
*6. Tenacidad
7. Impenetrabilidad

* ____ Propiedad de algunos cuerpos de ofrecer resistencia.

____ Propiedad de algunos cuerpos de recuperar su forma tanpronto cesa la fuerza deformadora.

____ propiedad de algunos cuerpos de reducirse a láminas.

____ Propiedad que tienen los cuerpos de no ocupar un mismo espacio a la vez.

____ Propiedad que tienen los cuerpos de conservar su estado de reposo en que se encuentran a menos que no actúe sobre ellos alguna fuerza.

VIII.- Escribe dentro del paréntesis de la definición de la derecha, la letra que acompaña el nombre del aparato de la izquierda que le corresponde.

a) Sifón
b) Balanza
c) Voltámetro
d) Plomada
e) Bomba
f) Dinamómetro

( ) Extrae agua de la tierra.

( ) Sirve para traspasar líquido de un recipiente a otro.

( ) Se usa para separar el agua en sus elementos

( ) Sirve para pesar los cuerpos.

( ) Mide la dirección vertical.

IX.- a) Escribe sobre la raya la utilidad de cada aparato:

*1) Sismógrafo ____________________
2) Termómetro ____________________
3) Pluviómetro ____________________
4) Barómetro ____________________
5) Densímetro ____________________

b) En el cuadro de más abajo llena los espacios en blanco con el símbolo o el nombre de los cuerpos representados:

Símbolo :	Fe :		Potasio :	Co :
Cuerpo :		: Plata	:	: Hidrógeno

X.- Completa correctamente estas expresiones:

a) La capa de aire que rodea la tierra se llama ______________________

b) Los líquidos se deforman fácilmente debido a que __________________

c) Los espacios que deja la materia entre sus moléculas se llaman ___ ________________________

d) El oxígeno se encuentra en la naturaleza en estado ________________

e) La carga negativa del átomo se llama ____________________________

República Dominicana

SECRETARIA DE ESTADO DE EDUCACION, BELLAS ARTES Y CULTOS

X/88

Dirección General de Educación de Adultos

PRUEBAS GENERALES DE TERMINO DE EDUCACION INTERMEDIA
AÑO LECTIVO 1974/75.

INGLES

Nombre del alumno ______________________________

Escuela ______________________ No. de orden __________

Localidad ______________________ Fecha __________

Nombre del maestro ______________________________

I.- Completa las oraciones siguienes con is o are, según convenga a la expresión:

1. The books __________ small
2. The teacher __________ in the class
3. The desk __________ black

*4. That boy __________ students

5. The door __________ opened

II.- Contesta en inglés estas preguntas:

1) How do you do? ______________________________

2) What is your name? ______________________________

3) Where do you live? ______________________________

4) Where are you? ______________________________

5) What day is today? ______________________________

*III.- Ecribe en inglés la hora que marca cada reloj:

IV.- a) Escribe en inglés los siguientes números:

a) 68 ______________________________

b) 21 ______________________________

c) 35 ______________________________

d) 9 ______________________________

e) 15 ______________________________

b) Escribe el femenino de las siguientes palabras:

a) man ______________ b) father ______________

c) he ______________________ d) boy ____________________

e) uncle ___________________

V.- Pon el nombre correspondiente a cada una de las partes que señalan las flechas en el siguiente dibujo:

(Drawing of a human figure is omitted.)

VI.- Convierte las siguientes oraciones en negativa:

a) The State is big ____

b) The man es human ____

c) The house is yellow ____

d) The children are smalls _______________________________________

e) the boy is poor ____

VII.- a) Forma el plural de las siguientes palabras:

Man _________________, woman ___________________, pencil ___________

chil ____________________, table ______________________

b) Escribe en forma numérica las cantidades escritas en inglés:

two ________________, seven _________________, four ______, twenty one _________, forty five ______________

VIII.- De las palabras encerradas en el paréntesis subraya la que complete mejor la oración:

1) (We, She, Betty) are not parents

2) (I, he, it) Am student

3) (We, she, you) are my teacher

4) (I, we, she) Am very well

5) (I, he, we) goos to the school

IX.- Forma oraciones con cada una de las palabras siguientes:

desk, pencil, girl, school, door

____

____

____

____

X.- Completa con un verbo cada una de las oraciones siguientes:

a) My nother ____________________ very good

b) The teacher ____________________ a book

c) The father ____________________ te the city

d) Henry ____________________ the door

e) I ____________________ a house

ESCUELAS RADIOFONICAS SANTA MARIA

EXAMENES GENERALES DE LA EDUCACION PRIMARIA PARA ADULTOS. Año Lectivo 1974-1975

LENGUA ESPAÑOLA

LECTURA EXPRESIVA: "EL REY Y EL MERCADER"

Había una vez un comerciante muy rico, que tenía un palacio y muchísimos criados. Al enterarse, el rey del país lo mandó a llamar y le dijo:

— No está bien que vivas mejor que yo. Morirás a menos que contestes estas dos preguntas: ¿dónde está el centro de la tierra? y ¿en qué estoy pensando ahora? Tienes seis semanas para contestarlas.

El comerciante buscó por todo el país alguien que pudiera contestar las preguntas. Pero la gente se reía de él. Al fin, al pasar por una choza, se encontró con un pastor. Este le dijo:

— Animo. Llévame al palacio y no perderás tu cabeza. Dame tu capa de terciopelo y haz que me acompañen tus soldados.

Al verlo llegar, el rey le hizo la primera pregunta. Rápidamente, el pastor le contestó:

— El centro de la tierra está aquí. Si no lo cree puede medir la tierra y convencerse.

— ¡Bien contestado!, dijo el rey. Ahora la segunda: ¿en qué estoy pensando yo?

— Su majestad está pensando en que soy un rico comerciante, cuando en realidad soy un pastor.

Y al decir ésto se quitó la capa. El rey se rió mucho y le dijo al pastor:

— Eres más sabio que el comerciante. A él le perdonaré la vida y haré que a tí te den un saco de dinero.

ESCUELAS RADIOFONICAS SANTA MARIA

EXAMENES GENERALES DE LA EDUCACION PRIMARIA
PARA ADULTOS. Año Lectivo 1974-1975

LENGUA ESPAÑOLA

Alumno: ______________________________

Fecha: ____________________ Sector: ____________

LECTURA COMPRENSIVA

"HERCULES Y EL LEON"

Hace mucho tiempo, en una región llamada Nemea, existió un león muy feroz. Otros animales huían al verle, y todos los habitantes de los alrededores estaban asustados. Creían que ese terrible león había bajado de la Luna y que era inmortal. Lo cierto era que ante el temor de todos, la fiera hacía cada vez más destrozos.

También por aquellos lugares vivía Hércules, un hombre notable por su enorme fuerza, quien, al enterarse de los estragos realizados por el león, se dirigió al bosque en su búsqueda.

Después de mucho caminar logró verlo. Ocultándose para no ser descubierto por la bestia, le disparó una flecha. Grande fue su sorpresa al ver que rebotaba en la durísima piel del animal. Y más creció su asombro al descubrir que lo mismo sucedía con las demás flechas que le disparaba.

El león, ya furioso, se lanzó sobre Hércules. Pero éste le dió un golpe tan terrible con su famosa maza, que el animal cayó al suelo aturdido. Antes de que pudiera levantarse, Hércules lo cogió entre sus brazos y comenzó a apretarle el cuello hasta que lo ahorcó.

Cuando fue a quitarle la piel, se dió cuenta de que no podía atravesarla con su espada. Tuvo que arrancarla con las mismas garras de la fiera. Al ver que la piel de aquel león era tan dura, se hizo con ella una coraza para protegerse en los combates.

NOTA AL MAESTRO CORRECTOR: Permita que el alumno lea esta lectura durante tres minutos.

Después se le retirará la hoja y contestará el cuestionario en diez minutos.

ESCUELAS RADIOFONICAS SANTA MARIA

EXAMENES GENERALES DE LA EDUCACION PRIMARIA PARA ADULTOS. Año Lectivo 1974-1975

LENGUA ESPAÑOLA

ALumno: ____

Fecha: ________________________ Sector: ____________

CUESTIONARIO

1.- ¿Cuál es el título de la lectura? ____________________

2.- ¿En qué región vivía el feroz león? ____________________

3.- ¿Qué pensaban los habitantes del lugar sobre el león? ____
____

4.- ¿Por qué era famoso Hércules? ____________________

5.- ¿Qué hizo Hércules al enterarse de los desastres ocasionados por el león? ____________________

6.- ¿Qué pasó con la primera flecha que le disparó al león?
____

7.- ¿Con qué le pegó Hércules? ____________________

8.- ¿Cómo mató al león? ____________________

9.- ¿Con qué le arrancó la piel? ____________________

10.- ¿Qué hizo Hércules con la piel? ____________________

VALORACION: Cada pregunta vale diez puntos.

ESCUELAS RADIOFONICAS SANTA MARIA

EXAMENES GENERALES DE LA EDUCACION PRIMARIA
PARA ADULTOS. Año Lectivo 1974-1975

LENGUA ESPAÑOLA

Alumno: ____

Fecha: ____________________________ Sector: ___________

EXPRESION Y COMUNICACION ESCRITAS Y ORTOGRAFIA

Describe brevemente el trabajo que realizas a diario. Trata de no cometer faltas de ortografía, ya que se tomarán en cuenta al calificar tu trabajo.

ESCUELAS RADIOFONICAS SANTA MARIA

EXAMENES GENERALES DE LA EDUCACION PRIMARIA
PARA ADULTOS. Año lectivo 1974-1975.

LENGUA ESPAÑOLA

Alumno: ______________________________. Curso: __________

Fecha: ______________________________. Sector: __________

CALIDAD DE LA ESCRITURA.

Escribe con tu mejor letra la siguiente oración, tantas veces como te sea posible:

El hombre se desarrolla en comunidad.

NOTA AL MAESTRO CORRECTOR: Deje que el alumno escriba esta oración tantas veces como él pueda durante tres minutos. Para poner la nota de Calidad de la Escritura, confronte esta hoja por la parte de atrás donde tiene la escala.

Para poner la nota de Calidad de la Escritura, fíjese si la caligrafía es buena, entonces ponga la nota de Calidad de la Escritura.

Para la nota de Fluidez: Multiplique el número de oraciones escritas por el alumno por 6 y divida este producto entre tres. El cociente de esa división es el número de palabras escritas por minutos Use la siguiente escala para saber cuanto ganó el alumno.

17 ó más	100
15 ó 16	90
13 ó 14	80
11 ó 12	70
9 ó 10	60
8	50
7	40
6	30
5	20
4	10

ESCUELAS RADIOFONICAS SANTA MARIA

EXAMENES GENERALES DE LA EDUCACION PRIMARIA
PARA ADULTOS. AÑO LECTIVO 1974-75.

ASIGNATURA: INFORMACION GRAMATICAL. FECHA: ____________________

ALUMNO: ________________________________ SECTOR: ____________

I.- Subraya el sujeto de las siguientes oraciones:

1. Vinieron a mi casa hace varias semanas.
2. Los hijos de esa señora se portan bastante mal.
3. Juan y José son dos buenos vecinos.
4. En la noche vino el dueño de la tienda.
5. La República Dominicana es un país joven.

II.- Complete los espacios en blanco con la palabra correcta:

1. ________________ es un conjunto de palabras que expresan un pensamiento completo.
2. ________________ es la palabra que sirve para llamar a las personas, los animales y las cosas.
3. Las palabras que sirven para unir palabras u oraciones se llaman ____________________.
4. El modo imperativo expresa ____________________.
5. Verbos ____________________ son aquéllos que al conjugar se cambian su radical y sus desinencias se apartan de las propias de su conjugación.

III.- Diga si las siguientes oraciones son afirmativas, negativas, interrogativas, admirativas o imperativas.

1. El desea cambiar de vida. ____________________
2. ¡Vete a la cama! ____________________
3. Juan no quiere comer nada. ____________________
4. ¡Qué lindo está el día! ____________________
5. ¿Por que no trabajas? ____________________

IV.- Escriba el pronombre personal que corresponda a cada oración:

1. ________________ descansamos.
2. ________________ como mucho al mediodía.
3. ________________ estudia por la radio.
4. ________________ atendieron a nuestros reclamos.
5. ________________ bailarás en la fiesta.

V.- Diga si los siguientes verbos son regulares o irregulares:

1. ayudar ________________
2. caber ________________
3. traer ________________
4. servir ________________
5. querer ________________

VI.- De las palabras entre paréntesis, subraye la que mejor complete el sentido de la oración.

1. Sustantivos (abstractos, concretos, omitidos) son los que representan a seres que se pueden ver y tocar.
2. Para expresar una acción que se realiza si se cumple una condición, se usa el modo (indicativo, subjuntivo, potencial).
3. El complemento (directo, indirecto, circunstancial) modifica el significado del verbo por una condición de lugar, modo, etc.
4. Pronombres (personales, posesivos, demostrativos) son los que sustituyen a los nombres de las personas.
5. "Allí" es un adverbio de (modo, lugar, afirmación).

VII.- Subraye el complemento directo (si lo hay) de las siguientes oraciones:

1. El campesino necesita ayuda.
2. Buscaré el dinero hoy temprano.
3. Voy con Pedro al colmado.
4. La tierra necesita abono para producir.
5. La madre alimenta a su hijo.

VIII.- Conjugue el verbo "PARTIR" en el tiempo que se le pide del modo indicativo:

1. Nosotros ____________________ (Futuro)
2. Yo ____________________ (Antepretérito)
3. Ella ____________________ (Presente)
4. Tú ____________________ (Antepresente)
5. Ellos ____________________ (Copretérito)

IX.- Indique el modo en que están los siguientes verbos.

1. amaré ________________
2. he sido ________________
3. ¡obedece! ______________
4. buscarías ________________
5. haya caído ________________

X.- En las siguientes oraciones subraye los adverbios y diga a qué clase pertenecen.

1. Ella está comiendo mucho. ________________
2. Jamás vuelvas a hablarme. ________________
3. Llegaré hoy. ________________
4. Quizás compre una vaca. ________________
5. Cumpliré fielmente mi palabra. ________________

VALORACION: Cada tema vale 10 puntos.

ESCUELAS RADIOFONICAS SANTA MARIA

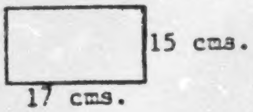
EXAMENES GENERALES DE LA EDUCACION PRIMARIA PARA ADULTOS. AÑO LECTIVO 1974-75.

ASIGNATURA: MATEMATICAS. FECHA: ______________________________.

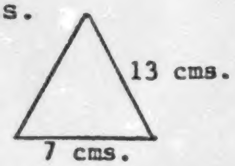
NOMBRE DEL ALUMNO: ______________________________. SECTOR: _____.

I.- a) Halle el área de las siguientes figuras.

1)



2)

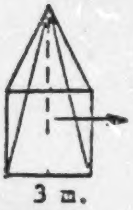


b) Reduzca las siguientes unidades.

1) En 150 cms. hay ____________ metros.
2) En 15 kms. hay ____________ dms.
3) En 122 mgs. hay ____________ Dgs.
4) En 300 litros hay ____________ dls.
5) En 150 Dms.^{2} hay ____________ ms.^{2}

II.- a) María tiene un recipiente lleno de agua. El peso del agua es de 155 gramos. ¿Cuántos mililitros hay?

b) Halle el área lateral de una pirámide; sabiendo que la base de ella es cuadrangular y que uno de sus lados mide 3 metros y su altura es de 10 metros.



PLANTEO OPERACION

RESPUESTA: ______________________

III.- a) Un estudiante de quinto curso de nuestras Escuelas acumuló en Matemáticas las siguientes notas: 80, 60 y 75. ¿Cuál fue su nota promedio a fin de año?

RESPUESTA: ______________________

(CONTINUA DETRAS).

III.- b) ¿Cuál es el área de un círculo cuyo diámetro mide 18 metros?

PLANTEO OPERACION

RESPUESTA: ________________

IV.- a) Doña Nena tiene 90 dulces para venderlos, durante una mañana, pero sólo ha podido vender las dos terceras partes de ellos. ¿Cuántos dulces vendió?

PLANTEO OPERACION

RESPUESTA: ________________

b) Uno de los lados de un pentágono regular mide 15 cms. de largo y su apotema es de 6.7 cms. ¿Cuál es el área de ese polígono?

PLANTEO OPERACION

RESPUESTA: ________________

V.- a) María tomó prestados $50.00, por los que tiene que pagar $5.00 de interés. ¿Qué por ciento ha pagado María?

PLANTEO OPERACION

RESPUESTA: ________________

b) Realice las siguientes operaciones:

a) 3/4 + 2/4 =

b) 4/2 - 1/2 =

c) 7/9 X 1/5 =

d) 8/6 ÷ 1/3 =

e) 2/11 + 3/11=

VALORACION : Cada tema vale 20 puntos. TOTAL: 100 PUNTOS.

ESCUELAS RADIOFONICAS SANTA MARIA

EXAMENES GENERALES DE LA EDUCACION PRIMARIA PARA ADULTOS. AÑO LECTIVO 1974-75.

ASIGNATURA: ESTUDIOS SOCIALES. FECHA: ______________________

ALUMNO: ________________________________ SECTOR: __________

I.- De las palabras encerradas entre paréntesis, subraye la que mejor complete el sentido de la oración.

1. La superficie ocupada por los mares y océanos es (dos, -- tres, cuatro) veces mayor que la ocupada por tierra.
2. Los Montes Pirineos separan a España de (Francia, Bélgica, Italia).
3. La organización para el comercio entre los países de Europa Occidental es denominada (Mercado Común, Comecón).
4. El río más extenso de Africa es el (Congo, Zambese, Nilo).
5. Los Montes Himalaya se encuentran en el continente (americano, auropeo, asiático, africano).

II.- Diga a qué continente pertenecen los siguientes países, ríos, etc.

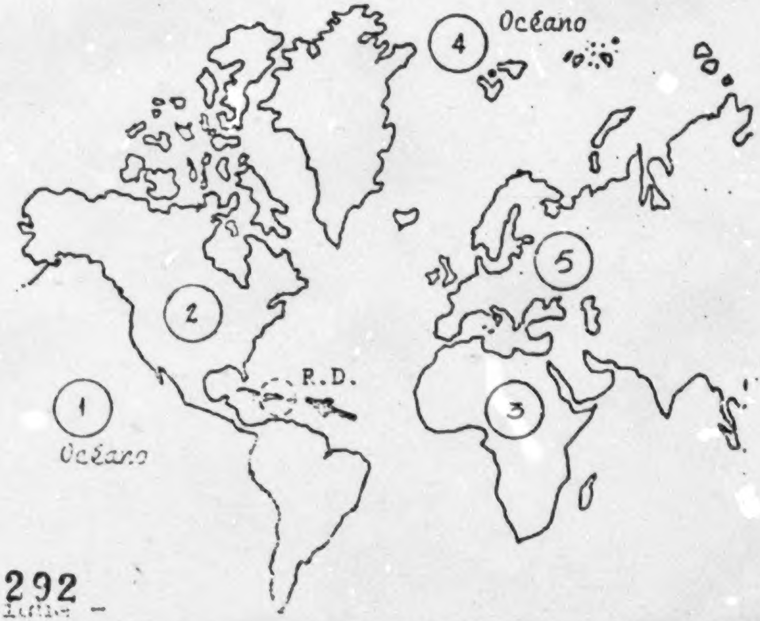
1. Egipto ______________
2. Los Alpes ______________
3. El Danubio ______________
4. India ______________
5. El Amazonas ______________

III.- Complete los espacios en blanco.

1. El más famoso de los reyes francos fue ______________.
2. El régimen social y económico de la Edad Media, basado en la posesión de las tierras se llamó ______________.
3. Las ______________ fueron luchas religiosas para recuperar los lugares sagrados del poder de los turcos.
4. La clase social dedicada al comercio y la artesanía que - nació a finales de la Edad Media fue ______________.
5. El país donde comenzó el Renacimiento fue ______________.

IV.- En el siguiente mapa hay números que indican continentes y océanos. Escriba su nombre en el espacio en blanco correspondiente.

1. ______________
2. ______________
3. ______________
4. ______________
5. ______________



V.- Enumere del 1 al 5 los siguientes hechos históricos, según el orden cronológico en que tuvieron lugar.

_____ Invención de la escritura

_____ Revolución Francesa

_____ Descubrimiento de América

_____ Independencia de los países de América Lat.

_____ Imperio Romano

VI.- En la columna de la izquierda están algunos hechos importantes. A la derecha se encuentran las causas que los originaron. En el espacio en blanco, escriba la letra del hecho correspondiente.

a. Reforma Protestante
b. Caída del Imperio Romano
c. Descubrimiento de América
d. Renacimiento
e. Revolución Francesa

_____ 1. Necesidad de una nueva ruta para comerciar con el Oriente.
_____ 2. Búsqueda de la cultura griega
_____ 3. Relajamiento de las costumbres de la Iglesia.
_____ 4. Ideas de igualdad entre todos los hombres.
_____ 5. Invasión de los bárbaros.

VII.- En la columna de la izquierda figuran nombres de personajes famosos. A la derecha están los hechos realizados por algunos de ellos. Escriba en la raya la letra del personaje correspondiente.

a. Napoleón
b. Licurgo
c. Ciro
d. Gutenberg
e. Martín Lutero
f. Luis XIV
g. Washington
h. Cristóbal Colón

_____ 1. Inventó la imprenta.
_____ 2. Fundó el Imperio Persa.
_____ 3. Inició la Reforma Protestante.
_____ 4. Fue el líder de la Independencia de los Estados Unidos.
_____ 5. Fue coronado emperador de los franceses a la caída del Directorio.

VIII.- De las palabras entre paréntesis, subraye la que mejor complete el sentido de la oración.

1. La facultad que tienen las personas para hacer u obtener algunas cosas es llamada (deber, ley, derecho).
2. El conjunto de leyes que rigen a un país se llama (constitución, código, estatuto).
3. El principal derecho del hombre es el derecho (a la propiedad, al descanso, a la vida).
4. La primera Constitución Dominicana fue votada en (1650, 1844, 1910).
5. En la República Dominicana, para ser considerado plenamente ciudadano es necesario haber cumplido (16, 18, 21) años.

IX.- Ponga una V o una F según sean verdaderas o falsas las siguientes afirmaciones:

_____ 1. Dios creó el mundo para todos los hombres y no solamente para algunos.
_____ 2. Los egipcios dieron la libertad a los israelitas sin que estos tuvieran que luchar.
_____ 3. Jesucristo no encontró oposición por parte de los fariseos y saduceos.
_____ 4. La Iglesia es el nuevo pueblo de Dios.
_____ 5. David fue el fundador de la monarquía del pueblo israelita.

VALORACION: [illegible] punto VIII vale 20, los demás valen 10.

ESCUELAS RADIOFONICAS SANTA MARIA

EXAMENES GENERALES DE LA EDUCACION PRIMARIA
PARA ADULTOS. AÑO LECTIVO 1974-75.

ASIGNATURA: CIENCIAS NATURALES. FECHA: ____________________

ALUMNO: ______________________________ SECTOR: __________

I.- Ponga una V o una F según sean verdaderas o falsas las siguientes afirmaciones:

____ 1. Según su origen los alimentos pueden ser orgánicos o minerales.
____ 2. Los alimentos protectores son ricos en vitaminas y grasas.
____ 3. Un grupo organizado de células de la misma naturaleza forma un tejido.
____ 4. Los músculos intervienen para realizar los movimientos de las distintas partes del cuerpo.
____ 5. La faringe es un órgano del aparato respiratorio.
____ 6. El hígado es una de las principales glándulas digestivas.
____ 7. La absorción es el acto por el cual las materias digeridas son empujadas hacia el intestino grueso.
____ 8. Los bronquios terminan en tubos muy finos llamados vasos capilares.
____ 9. Las plantas realizan sus funciones de nutrición por medio del aparato vegetativo.
____10. El esófago comienza en la faringe y termina en el estómago.

II.- A) En la columna de la izquierda tiene una serie de conceptos.- A la derecha están las definiciones de algunos de ellos. Escriba la letra de cada concepto en la raya en blanco de la definición correspondiente.

a. Cofia
b. Médula espinal
c. Pleura
d. Sistema óseo
e. Peciolo
f. Sistema Nervioso
g. Cardias
h. Bulbo Raquídeo
i. Polea
j. Columna Vertebral
k. Palanca

____ 1. Es la membrana que recubre los pulmones.
____ 2. Tiene como función regular y dirigir el funcionamiento de todos los órganos del cuerpo.
____ 3. Es un largo y grueso cordón blanco que comienza en el bulbo raquídeo y termina en la segunda vértebra lumbar.
____ 4. Es el rabillo que une la hoja al tallo de una planta.
____ 5. Es una barra que gira alrededor de un punto fijo, llamado punto de apoyo.

B) Diga si los siguientes frutos son secos o carnosos: MAIZ, PIÑA, MANI, CAIMITO, ARROZ.

SECOS: ______________________________

CARNOSOS: ______________________________

(Sigue)

III.- A) Complete los espacios en blanco.

1. El órgano que sostiene las plantas es la ____________.
2. El ________________ es la parte femenina de la flor.
3. El pericarpio de un fruto es la ________________.
4. El color verde de las hojas es debido a una sustancia -- llamada ________________.
5. El óvulo transformado y maduro es la ____________.

B) Diga a qué sistemas del organismo pertenecen estos órganos:

1. corazón ____________
2. pulmones ____________
3. encéfalo ____________
4. dientes ____________
5. fémur ____________

IV.- A) Escoja la palabra que mejor completa el sentido de la oración entre las que se encuentran entre paréntesis y subráyela.

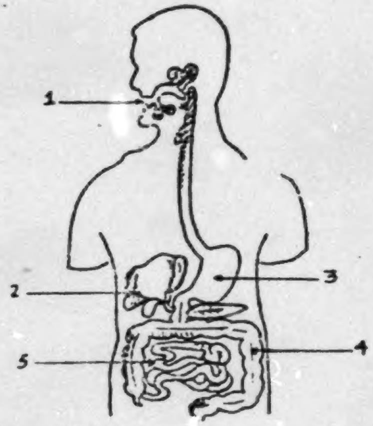
1. El conejo es un mamífero (insectívoro, roedor, rumiante)
2. El (pedúnculo, tallo, gineceo) es la parte de la planta que sostiene las ramas y las hojas.
3 Las aves (palmípedas, zancudas, prensadoras) son acuáticas y tienen los dedos unidos por una membrana.
4. Los (saurios, ofidios, quelonios) tienen un pico córneo parecido al de las aves.
5. La raíz del maíz es (típica, fibrosa, tuberosa).

B) Clasifique los siguientes vertebrados, escribiendo el nombre de cada uno de ellos en la línea correspondiente a su clase: lagarto, sardina, caballo, cocodrilo, rana, gallina, salamandra, pato, tiburón, vaca. Siga el ejemplo:

PECES: ____________________
MAMIFEROS: Vaca, ____________________
AVES: ____________________
REPTILES: ____________________
ANFIBIOS: ____________________

V.- A) En el dibujo de la derecha aparecen algunas partes señaladas por un número. Escriba en la raya correspondiente el nombre de la parte indicada.

1. ________________
2. ________________
3. ________________
4. ________________
5. ________________



B) De las respuestas entre paréntesis subraye la correcta.

a) La carretilla es una palanca de (primer género, de segundo género).
b) El (hierro, azufre) es un mineral metálico.
c) La (tropósfera, atmósfera) es la masa de aire que rodea la tierra.

VALORACION: Cada punto tiene un valor de 20 puntos.

ESCUELAS RADIOFONICAS SANTA MARIA

EXAMENES GENERALES DE LA EDUCACION PRIMARIA
PARA ADULTOS. AÑO LECTIVO 1974-75.

ASIGNATURA: ECONOMIA DOMINICANA. FECHA: ____________________

ALUMNO: ______________________________ SECTOR: __________

I.- Ponga una V o una F según sean verdaderas o falsas las siguientes afirmaciones:

___ 1. La empresa es la organización de los factores productivos para obtener un bien o servicio.
___ 2. En la producción moderna hay relación directa entre la empresa productora y el cliente.
___ 3. El Banco de Reservas es una institución que ofrece créditos a los agricultores para la siembra.
___ 4. El mejoramiento de las vías de comunicación ha favorecido las relaciones económicas entre los países.
___ 5. El hombre primitivo producía más de lo que necesitaba.
___ 6. Mercado local es el que sólo satisface las necesidades de una comunidad o localidad.
___ 7. El Estado promueve la inversión privada mediante la construcción de obras básicas: carreteras, presas, puertos...
___ 8. Si hay mucha demanda y poca oferta los precios suben.
___ 9. En nuestro país predominan las importaciones de bienes de producción.
___10. Industria ligera es la que produce bienes de consumo corrientes.

II.- A) Complete los espacios en blanco.

1. El principal producto de exportación del país es el ____________________.
2. Al intercambio de mercancías del hombre primitivo llamamos ____________________.
3. La moneda extranjera que sirve como base para el intercambio comercial es llamada ____________________.
4. ____________________ es la contabilidad del intercambio económico que ha tenido lugar durante un tiempo determinado entre un país y los otros.
5. ____________________ es un período de aumento general, permanente y progresivo de los precios.

B) Al lado de cada uno de los minerales que se dan a continuación, escriba el nombre del lugar donde se encuentran.

1. Ferroníquel ____________________
2. Sal ____________________
3. Ambar ____________________
4. Oro ____________________
5. Bauxita ____________________

III.- A) Mencione 2 factores que obstaculizan el desarrollo del campo:

1. ____

2. ____

B) De las palabras entre paréntesis, subraye la que mejor complete el sentido de la oración.

1. Cuando las importaciones son mayores que las exportaciones se dice que hay (superávit, deficit).
2. Las empresas que se dedican a las actividades mineras pertenecen al sector (primario, secundario, terciario).
3. Los descuentos que hace el Estado a los ciudadanos, según su sueldo, propiedades, etc., son (directos, indirectos).
4. Los bienes y servicios adquiridos en otros países para satisfacer la demanda interna son (exportaciones, importaciones).
5. El Banco (Agrícola, Central, de Reservas) es el encargado de la emisión de billetes.

IV.- A) A la izquierda tiene una serie de conceptos. A la derecha están sus definiciones. Escriba el nombre del concepto en la raya en blanco correspondiente.

Bancos
Demanda
Secundario
Terciario
Ahorro fiscal
Oferta
Cooperativa
Balanza de pagos
Mercado

1. ________________ Es el acto de ofrecer al consumidor los bienes producidos.
2. ________________ Es la diferencia entre los ingresos y los gastos del Estado.
3. ________________ Es el sector formado por empresas industriales.
4. ________________ Es una sociedad organizada voluntariamente para lograr mejores condiciones de vida.
5. ________________ Son instituciones financieras que reciben el ahorro del público.

B) Mencione 2 principios sociales de toda cooperativa:

1. ____

2. ____

V.- A) Diga a qué sector de la producción (primario, secundario o terciario) pertenecen las siguientes empresas:

1. agricultura ________________
2. carpintería ________________
3. Falconbridge ________________
4. Cía de Teléfonos ________________
5. Metaldom ________________

B) Mencione dos provincias productoras de:

1. Azúcar: ________________________________
2. Cacao: ________________________________
3. Ganado: ________________________________
4. Licores: ________________________________
5. Tabaco: ________________________________

VALORACION: Cada tema vale 20 puntos.

ESCUELAS RADIOFONICAS SANTA MARIA

EXAMENES GENERALES DE LA EDUCACION INTERMEDIA PARA ADULTOS. Año Lectivo 1974-1975

LENGUA ESPAÑOLA

LECTURA EXPRESIVA

"EL LOBO, EL COYOTE Y EL LEON"

Un lobo, un coyote y un león vivían juntos en la misma cueva. Se llevaban muy bien porque habían hecho un pacto: cualquiera de los tres que consiguiera comida, tenía que repartirla con los demás.

Las cosas iban muy bien mientras había comida en abundancia. Pero un día, la comida empezó a escasear. Salían los tres a la selva y no lograban encontrar comida. En una de tantas salida, lo único que lograron encontrar fue un panecillo que alguien había botado de camino.

-Este panecillo no alcanza para los tres -dijo el león.

-Yo creo que solo debe comérselo -dijo el coyote.

-Muy bien -dijo el lobo - que se lo coma el más viejo de los tres.

-Yo soy el más viejo -dijo el león - porque yo soy el león que estuvo en el Arca de Noé.

-Entonces -contestó el lobo - eres un chiquillo a mi lado, yo soy el lobo que Dios creó en el Paraíso. Hasta recuerdo haber jugado con Adán y Eva.

-¿Y cómo nunca te vi en el Arca de Noé? -pregunto el león.

-Ah, porque yo no estaba con todos los animales, yo siempre estaba echado a los pies de Noé.

El coyote era más humilde. Viendo que era inútil meterse en la discusión, tomó cuidadosamente el panecillo entre sus dientes y desapareció en el bosque.

ESCUELAS RADIOFONICAS SANTA MARIA

EXAMENES GENERALES DE LA EDUCACION INTERMEDIA
PARA ADULTOS. Año Lectivo 1974-1975

LECTURA COMPRENSIVA

CUESTIONARIO

NOMBRE DEL ALUMNO: ______________________________. CURSO: 8 .
FECHA: ______________________________. SECTOR: __________.

1.- ¿Cómo se comportaba el hacendado con la gente que vivía en sus dominios? ______________________________.

2.- ¿Cuál era la situación económica de la gente? ______________________________.

3.- ¿Cómo eran los salarios que pagaba el hacendado? ______________________________.

4.- ¿A quién acudió la gente cuando llegó el hambre? ______________________________.

5.- ¿De qué forma intervino el rey en el asunto? ______________________________.

6.- ¿Cuál fue el primer plato que sirvieron al rey? ______________.

7.- ¿Cuántos platos logró probar el hacendado? ______________.

8.- ¿Qué dijo el rey al terminar el banquete? ______________.

9.- ¿Entendió el hacendado la lección que le dio el rey? ______________________________.

10.- ¿Qué actitud tuvo el hacendado desde entonces hacia los pobres? ______________________________.

VALORACION: CADA TEMA VALE 10 PUNTOS. TOTAL: 100 PUNTOS.

ESCUELAS RADIOFONICAS SANTA MARIA

EXAMENES GENERALES DE LA EDUCACION INTERMEDIA
PARA ADULTOS. Año lectivo 1974-1975

LENGUA ESPAÑOLA

LECTURA COMPRENSIVA

"EL HUESPED DEL REY"

Hubo una vez un rico personaje que era en extremo cruel con las pobres gentes que vivían en sus dominios. Eran todas ellas sumamente miserables, y el hacendado, que era dueño de aquellas tierras y utilizaba los servicios de la comarca, les pagaba salarios muy escasos y los oprimía por todos los medios a su alcance.

El país se vio asolado por un hambre espantosa, y los pobres acudieron al castillo del señor en demanda de pan; pero él no quiso darles ni un pedazo.

Llegó el caso al conocimiento del rey e invitó a comer al hacendado rico. Le condujo el monarca al comedor, donde había una mesa preparada con exquisitos manjares y muchos criados dispuestos a servirlos.

Presentaron al rey un plato de sopa, y cuando ya estaba a punto de terminarla, le sirvieron un plato igual al hombre rico, pero cuando éste se disponía tomar la primera cucharada, el rey concluyó su sopa y retiraron los platos y el rico no pudo probarla.

De la misma manera le fueron presentando plato tras plato al monarca, y éste ponderaba a su huésped cuán sabrosos estaban.

Terminó la comida sin que el rico lograra probar un solo plato. El Monarca no dijo una palabra del raro banquete que había ofrecido al hacendado, pero éste regresó a su castillo, y jamás olvidó la lección, que sin pronunciar una palabra le había dado el rey. A partir de aquel día se mostró compasivo con los pobres y fue siempre un fiel amigo de los menesterosos.

NOTA AL MAESTRO CORRECTOR: Permita que el alumno lea esta lectura durante tres minutos.

Después se le retirará la hoja y contestará el cuestionario en diez minutos.

ESCUELAS RADIOFONICAS SANTA MARIA

EXAMENES GENERALES DE LA EDUCACION INTERMEDIA
PARA ADULTOS. Año Lectivo 1974-1975

Asignatura: CALIDAD Y FLUIDEZ DE LA ESCRITURA. Fecha: ____________

Alumno: ______________________________. Sector: ____________

Escriba con tu mejor letra la siguiente oración todas las veces que puedas:

Una comunidad desunida no progresa

NOTA AL MAESTRO CORRECTOR: Deje que el alumno escriba esta oración tantas veces como él pueda durante 3 minutos. Para poner la nota de CALIDAD de la Escritura, fíjese si la caligrafía es buena.

Para poner la nota de FLUIDEZ, multiplique el número de oraciones escritas por 5 y divida este producto entre 3. El cociente de esa división es el número de palabras escritas por minuto. Use la siguiente escala para saber cuánto ganó el alumno:

22 o más	100
20 ó 21	90
18 ó 19	80
16 ó 17	70
14 ó 15	60
12 ó 13	50
10 ó 11	40
8 ó 9	30

ESCUELAS RADIOFONICAS SANTA MARIA

EXAMENES GENERALES DE LA EDUCACION INTERMEDIA
PARA ADULTOS. Año Lectivo 1974-1975

LENGUA ESPAÑOLA

NOMBRE DEL ALUMNO: ____. CURSO: 8ª.
FECHA: ____. SECTOR: __________.

EXPRESION Y COMUNICACION ESCRITAS Y ORTOGRAFIA

Escriba la forma en que se desarrolla normalmente el intercambio en su sector.

Trate de no cometer faltas de ortografía, porque se tomarán en cuenta al calificar su trabajo.

ESCUELAS RADIOFONICAS SANTA MARIA

EXAMENES GENERALES DE LA EDUCACION INTERMEDIA
PARA ADULTOS. Año Lectivo 1974-1975.

DIBUJO

NOMBRE DEL ALUMNO: ______________________________. CURSO: 8ª

FECHA: ______________________________. SECTOR: ____________

NOTA: Piense en alguno de los objetos que Ud. utiliza más frecuentemente y dibújelo lo mejor que pueda.

ESCUELAS RADIOFONICAS SANTA MARIA

EXAMENES GENERALES DE LA EDUCACION INTERMEDIA
PARA ADULTOS. AÑO LECTIVO 1974-75.

ASIGNATURA: INFORMACION GRAMATICAL. FECHA: ______________________________.

NOMBRE DEL ALUMNO: ______________________________________. SECTOR: _______.

I.- Escriba los sustantivos que aparecen a continuación en la columna que le corresponda. Siga el ejemplo: (Vale 10 puntos).

enjambre, gato, platanal, bondad, Altagracia, fidelidad, mesa, Luis, casa, rosa, Santiago.

COMUN	PROPIO	ABSTRACTO	COLECTIVO
	Luis		

II.- Al lado de cada adjetivo de la izquierda escriba el número de la derecha que indica el grado correspondiente. (Vale 10 puntos).

a) _______ máximo
b) _______ pequeño
c) _______ grande
d) _______ mejor
e) _______ pésimo

1) Positivo
2) Comparativo
3) Superlativo

III.- Subraye la palabra entre paréntesis que es sinónima de la indicada a la izquierda. (Vale 10 puntos).

1) Conflicto	1) (lucha, paz, desorden)
2) Extenso	2) (breve, ancho, largo)
3) Amable	3) (maligno, odioso, bueno)
4) Antigua	4) (joven, vieja, reciente)
5) Diálogo	5) (división, silencio, conversación).

IV.- Subraya los adverbios en las siguientes oraciones: (Vale 10 puntos).

1) Pedro llegó tarde al intercambio.
2) La sequía ha sido muy grande.
3) La graduación está cerca.
4) Nuestra comunidad casi no ha cambiado.
5) En este sitio apenas hay agua.

V.- Conjuga los verbos que se expresan a continuación. (Vale 10 puntos).

	VERBO	MODO	TIEMPO	PERSONA
1)	Salir	Imperativo	Presente	Tú ____________
2)	Pensar	Potencial	Simple	El ____________
3)	Nacer	Indicativo	Presente	Yo ____________
4)	Amar	Subjuntivo	Pretérito Imperfecto	Nosotros ____________
5)	Estudiar	Indicativo	Futuro Perfecto	Ellos ____________

VI.- Diga si las siguientes oraciones son YUXTAPUESTAS, COORDINADAS o SUBORDINADAS. (Vale 10 puntos).

1) ______________________ El pensaba venir, pero no pudo.

2) ______________________ José estudia, María juega.

3) ______________________ Yo deseo que tú te gradúes.

4) ______________________ Ser más o tener más.

5) ______________________ Te encontraré donde te halles.

VII.- Subraye la palabra que completa correctamente cada oración. (Vale 10 puntos).

1) La novela y el cuento son formas (líricas, narrativas, didácticas).

2) Juan A. Alix es el máximo representante de la poesía (popular, clásica, política).

3) "Hay un país en el mundo" es una obra de poesía social, cuyo autor es (Héctor Incháustegui, Gastón F. Deligne, Pedro Mir).

4) "Enriquillo" es una novela del siglo XIX escrita por (Manuel de Jesús Galván, F. García Godoy, Tulio M. Cestero).

5) Pedro Henríquez Ureña se destacó sobre todo en el género (narrativo, ensayístico, poético).

VIII.- Subraye los PREFIJOS o los SUFIJOS de las siguientes palabras. (Puede haber palabras que no tengan). (Vale 20 puntos).

1) Comprender
2) Colmado
3) Destruir
4) Grandote
5) Transportar
6) Librito
7) Estudiar
8) Trasatlántico
9) Arroyuelo
10) Subordinar

IX.- Subaye la palabra entre paréntesis que completa correctamente cada oración. (Vale 10 puntos).

1) "El niño dormía en una cuna" es una oración (transitiva, intransitiva).

2) Las oraciones en que dos o más sujetos ejecutan la acción y la reciben mutuamente son oraciones (impersonales, reflexivas, recíprocas).

3) La persona, animal o cosa que recibe directamente la acción verbal es el complemento (directo, indirecto, circunstancial).

4) Un complemento que lleva una preposición es un complemento (directo, indirecto, circunstancial).

5) Cuando un nombre es declinado para llamar o invocar se halla en caso (genitivo, vocativo, ablativo).

ESCUELAS RADIOFONICAS SANTA MARIA

EXAMENES GENERALES DE LA EDUCACION INTERMEDIA
PARA ADULTOS. AÑO LECTIVO 1974-75.

ASIGNATURA: MATEMATICAS. FECHA: ______________________________. SECTOR: _____.

NOMBRE DEL ALUMNO: ____.

I.- Resuelva el siguiente problema: (Vale 10 puntos).

Doña Josefa tiene una cantidad de dinero que desconocemos, pero sabemos que $48.00 representan el 24 % de esa cantidad. ¿Cuántos pesos tiene doña Josefa?

PLANTEO OPERACION

RESPUESTA: ____________________

II.- Resuelva: (Vale 10 puntos).

¿Cuál es el interés que producen $60.00 prestados al 12 % anual durante 50 días?

PLANTEO OPERACION

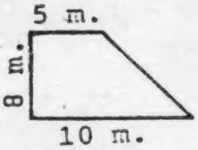
RESPUESTA: ____________________

III.- Extraiga la raíz cuadrada en cada caso. (Vale 10 puntos).

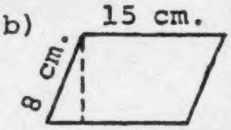
a) $\sqrt{169}$ b) $\sqrt{3,721}$

IV.- Halle el área de cada figura: (Vale 10 puntos).

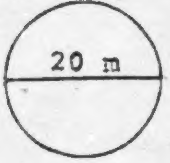
a)



b)



V.- Halle el área total de una fuente de agua circular cuyo diámetro mide 20 metros. (Vale 10 puntos).



VI.- Reduzca las siguientes unidades: (Vale 15 puntos).

a) 34 cms^2 a $metros^2$ =

b) 505 cms^2 a Dms^2 =

c) 15 ms a mm =

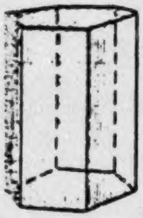
d) 0.22 kms a cms =

e) 9 Hms^3 a dms^3 =

VII.- Una Comunidad Campesina decidió construir un tanque para distribuir agua a todas las familias. Lo construyeron en forma de un prisma exaedro regular con las siguientes dimensiones:

Apotema : 3 ms.
Base : 7 ms.
Altura :10 ms.

¿Qué volumen tiene el tanque construido? (Vale 10 puntos)



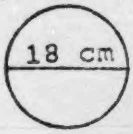
RESPUESTA ______________________

VIII.- Una escuela graduó 265 alumnos, o sea, un 6 % más que el año anterior. ¿Cuántos alumnos graduó el año anterior? (Vale 15 puntos)

PLANTEO OPERACION

RESPUESTA: ________________

IX.- Halle el perímetro o longitud de una circunferencia cuyo diámetro mide 18 cms. (Vale 10 puntos).



VALORACION TOTAL: 100 PUNTOS.

ESCUELAS RADIOFONICAS SANTA MARIA

EXAMENES GENERALES DE LA EDUCACION INTERMEDIA
PARA ADULTOS. Año Lectivo 1974-1975

ASIGNATURA: INGLES. FECHA: ______________________. CURSO: 8ª

NOMBRE DEL ALUMNO: ______________________________. SECTOR: ______

I.- Cambie las siguientes oraciones Afirmativas en Interrogativas, usando el verbo auxilio DO o DOES, según convenga. Vea el ej.:

I Speak English. *Do I speak English?*

(Vale 10 puntos).

1.- I clean the windows. ______________________

2.- You clean the windows. ______________________

3.- He cleans the windows. ______________________

4.- She cleans the windows. ______________________

5.- They clean the windows. ______________________

II.- Llene los espacios en blancos usando: Where, When, What, How, para preguntar, según convenga y cambie el verbo a su forma simple si es necesario. Sigue el ejemplo: (Vale 15 puntos).

I played baseboll. *When did you play?*

1) They went to the theatre. ______________________

2) They saw a good American movie. ______________________

3) The movie was in La Vega. ______________________

4) It began at eight-thirty. ______________________

5) They went home at ten-thirty. ______________________

III.- De las palabras entre paréntesis, subraye la correcta.
Ejemplo: He (have, has) to take the bus. (Vale 10 puntos).

1) We (go, goes) to school every day.

2) They (haven't, hasn't) traveled to Santiago.

3) I (try, tries) to read the book.

4) He didn't (like, liked) the circus.

5) She (want, wants) to learn English.

IV.- Forma la negación de las siguientes oraciones. Ejemplo:

I want to play baseball. *I don't want to play baseball.* (Vale 10 p).

1) John wants to read. ______________________

2) They like to go to the movie. ______________________

3) I am a nurse. ______________________

4) You are my friend. ______________________

5) This is your brother. ______________________

V.- Traduzca las siguientes oraciones al Español. Ejemplo:

He can play baseball. El puede jugar beisbol. (Vale 15 puntos).

1.- They can go to the movie. ____________________

2.- She must go to the Doctor's house. ____________________

3.- We will go to Santo Domingo, Sunday. ____________________

4.- May I go to Bill's house? ____________________

5.- We can eat dinner early. ____________________

VI.- Forme el pasado de los siguientes verbos. Recuerde que los verbos regulares forman su pasado añadiendo ED a la forma del infinitivo. Los irregulares tienen sus formas especiales. (Vale 10 p).

Ejemplo: like liked

1) Study ____________

2) Eat ____________

3) Make ____________

4) Drink ____________

5) Work ____________

VII.- Traduzca las siguientes oraciones al Español. (Vale 10 puntos).

Ejemplo: He could write the letter tonight.

El podría escribir la carta esta noche.

1.- He could call him, tomorrow. ____________________

2.- We would like to go the movie. ____________________

3.- You should stay in bed. ____________________

4.- Could she study with me? ____________________

5.- I should write a letter. ____________________

VIII.- A la derecha de cada palabra escriba su significado en Español.

Ejemplo: Brother hermano (Vale 20 puntos).

1) School ____________

2) Store ____________

3) Always ____________

4) Happy Birthday ____________

____

5) Late ____________

6) Early ____________

7) To work ____________

8) To study ____________

9) To go ____________

10) Student ____________

VALORACION TOTAL: 100 PUNTOS.

ESCUELAS RADIOFONICAS SANTA MARIA

EXAMENES GENERALES DE LA EDUCACION INTERMEDIA
PARA ADULTOS. Año Lectivo 1974- 1975

NATURALES

NOMBRE DEL ALUMNO: ______________________________________

FECHA: ______________________________. SECTOR # __________

I.- Escriba V o F si lo que se expresa es VERDADERO o FALSO. (Vale 10 puntos).

1. ___ Un cuerpo opaco no deja pasar la luz.
2. ___ Con el termómetro se mide la presión atmosférica.
3. ___ El aire caliente es más pesado que el aire frío.
4. ___ El calor dilata el volumen de los cuerpos.
5. ___ El sonido se propaga por el aire a 340 ms. por hora.

II.- Subraye la palabra entre paréntesis que completa correctamente cada oración: (Vale 15 puntos).

1. Fenómeno físico es aquel que (altera, no altera) la naturaleza de los cuerpos.
2. Un cuerpo se pone en movimiento al aplicarle (un punto - de apoyo, una fuerza, una resistencia).
3. Para representar a un cuerpo simple se utiliza (la fórmula, el símbolo).
4. El oro es un (metal, metaloide).
5. Gracias a (la presión atmosférica, la temperatura, la luz) es posible extraer agua de los pozos por medio de bombas.

III.- Clasifique las siguientes sustancias según sean METALES o METALOIDES, colocándolos en la columna correspondiente: (Vale 10 puntos).

Plata, oro, nitrógeno, cobre, azufre, carbono.

METALES	METALOIDES
________________	________________
________________	________________
________________	________________

IV.- Resuelva el siguiente problema: (Vale 10 puntos).

Un agricultor de 150 libras, sentado en un columpio, a 2 ms. - del punto de apoyo, logró levantar un saco de habichuelas que se encontraba a 3 ms. ¿Cuánto pesaba el saco de habichuelas?

RESPUESTA: _____ libras.

V.- Complete las siguiente oraciones. (Vale 10 puntos).

1) La escala Farenheit tiene ________ grados.

2) El paso del estado líquido al estado gaseoso en un cuerpo se denomina ________________________________.

3) La molécula se compone de ________________________.

4) La unión de dos o más sustancias que pueden ser separadas mecánicamente se llama ______________________________.

5) El gas más abundante en el aire es el _______________________.

VI.- Escriba junto a cada metal de la izquierda el número de la derecha que corresponde a sus propiedades o usos. (Vale 10 puntos).

a) _____ Plomo	1) Al combinarlo con el estaño se obtiene bronce.
b) _____ Oro	2) Uno de los metales más utilizados en varillas, verjas y maquinaria.
c) _____ Hierro	3) Metal noble o precioso que no se altera con el aire.
d) _____ Mercurio	4) Unico metal líquido.
e) _____ Cobre	5) Metal blando, usado para protegerse de los rayos X.

VII.- Subraye la palabra entre paréntesis que completa correctamente. (Vale 15 puntos).

1) El cambio de dirección de un rayo de luz al chocar con una superficie pulimentada es llamado (reflexión, refracción,inflexión).

2) Un cuerpo que tiene la propiedad de atraer a otros se conoce con el nombre de (espejo, imán, brújula).

3) Los cuerpos que dan paso a la electricidad son buenos (reflectores, generadores, conductores).

4) La tierra tiene electricidad (negativa, positiva).

5) El inventor del teléfono fue (Graham Bell, Edison, Carlos Braun).

VIII.- Responda las siguientes preguntas: (Vale 10 puntos).

1) ¿Qué fenómeno ocurre cuando se enciende un fósforo? ____________ ______________________________.

2) ¿Cuál es el más ligero de los gases? _______________________.

IX.- Complete las siguientes oraciones. (Vale 10 puntos).

1) El carbón natural más puro cristalizado es el __________________.

2) Los hidrocarburos son cuerpos compuestos de hidrógenos y ________ _________________________.

3) La gasolina es un producto derivado del ______________________.

4) Los sulfuros se producen al combinar metales con _______________.

5) La capacidad de combinación que tiene una sustancia en relación a otra se conoce con el nombre de _______________________________.

ESCUELAS RADIOFONICAS SANTA MARIA

EXAMENES GENERALES DE LA EDUCACION INTERMEDIA
PARA ADULTOS. Año Lectivo 1974-1975.

ASIGNATURA: SOCIALES. FECHA: ____________________.CURSO: 8ª
NOMBRE DEL ALUMNO: ________________________.SECTOR: ______

I.- Complete correctamente: VALE 10 PUNTOS

1. El primer metal utilizado por el hombre fue el ______________.
2. Los hombres de la Edad de Piedra vivían en ______________.
3. El desarrollo de la civilización egipcia fue posible gracias al ______________________.
4. Las tumbas de los faraones egipcios son llamadas ____________.
5. La escritura egipcia se componía de signos llamados __________.

II.- Al lado de cada acontecimiento histórico escriba EDAD ANTIGUA, MEDIA, MODERNA o CONTEMPORANEA, de acuerdo a la época en que se desarrolló. VALE 15 PUNTOS

a. Revolución Francesa 1. ____________________
b. Fundación del Imperio Persa por Ciro 2. ____________________
c. Las Cruzadas 3. ____________________
d. Segunda Guerra Mundial 4. ____________________
e. Descubrimiento de América 5. ____________________

III.- Escriba V o F junto a cada oración según sea VERDADERA o FALSA: VALE 15 PUNTOS

1. _____ La religión de los persas admitía la existencia de dos dioses: Ormuz y Arimán.
2. _____ El rey Hamurabí promulgó el código de leyes más importante de la Edad Moderna.
3. _____ Los fenicios vivían de la agricultura.
4. _____ La religión del pueblo hebreo era politeísta.
5. _____ Roma venció a Cartago en las Guerras Púnicas.

IV.- De las palabras encerradas entre paréntesis subraye la que complete correctamente cada afirmación: VALE 10 PUNTOS

1. El primer Patriarca del pueblo Hebreo fue (Jacob, Isaac, Abraham).
2. El reino de Israel se dividió a la muerte del rey (Saúl, David, Salomón).
3. La ciudad griega caracterizada por su espíritu militar y su formación guerrera era (Atenas, Esparta, Corinto).
4. En tiempo de Pericles, Grecia llega a adquirir un régimen (democrático, aristocrático, monárquico).
5. Los griegos derrotaron a los persas en las guerras (Púnicas, Médicas, Gálicas).

-sigue-

V.-Coloque el número de cada acontecimiento histórico al lado del personaje que intervino en su realización: VALE 15 PUNTOS

a. ____ Luis XIV	1.- Fue derrotado en la batalla de Waterloo
b. ____ Napoleón	2.- Escribió la "Ilíada" y la "Odisea.
c. ____ Homero	3.- Su matrimonio hizo posible la unidad de España.
d. ____ Moisés	4.- Fue el rey más absolutista de Francia - durante el siglo XVII.
e. ____ Reyes Católicos	5.- Preparó y dirigió el regreso del pueblo Hebreo a Palestina.

VI.- Complete las siguientes oraciones: VALE 10 PUNTOS

1. La primera persecusión contra los cristianos fue decretada por el emperador romano ______________________.
2. El mayor imperio de la Edad Antigua fue fundado por un discípulo de Aristóteles llamado ________________________.
3. El Edicto de Milán, concediendo libertad a los cristianos, fue dado por el emperador ________________________.
4. Los reyes romanos fueron sustituídos por dos magistrados que gobernaban durante un año y eran llamados ________________________.
5. La clase romana más adinerada y poderosa era la de los ____________

VII.- Identifique los autores de los siguientes hechos: VALE 15 PUNTOS

1. Durante su estancia de 7 siglos en España, introdujeron en Europa el papel, la pólvora y la brújula: ________________
2. Durante la Edad Media, constituían el 90 % de la población y se dedicaban a la agricultura: ___________________________.
3. Se apoderaron de Constantinopla en 1453 y prohibieron el paso de los barcos a Oriente: ______________________________.
4. Siendo grandes navegantes, dieron la vuelta al continente africano - hasta llegar al Oriente: _____________________________.
5. Pueblo indio cuya ciudad principal era Cuzco, en Perú. Su civilización era de las más avanzadas al momento del descubrimiento de América: _________________________________.

VIII.- Complete las siguientes oraciones: (Vale 10 puntos)

1.- La primera Constitución de la República Dominicana fue aprobada en la ciudad de ____________________________.

2.- El matrimonio __________________ puede disolverse por una decisión de la ley.

3.- La _______________________ es el acto por medio del cual la ley considera como nacidos del matrimonio a niños que han nacido fuera del mismo.

4.- El ____________________ es la retribución que el patrono debe pagar al trabajador por el trabajo realizado.

5.- El Estado adquiere la mayor parte de sus ingresos por medio de los ___________________________ directos e indirectos.

VALORACION TOTAL: 100 PUNTOS.